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Air Conditioning & REFRIGERATION

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NEWS

N. Y. Utility Plan Seeks Control of All Service Jobs

Consolidated Edison Co. Would Form Firm For Appliance Servicing

NEW YORK CITY—Plans for the formation of a company "to perform service and repair function for all appliances used on the lines of the Consolidated Edison system companies," were to be presented Tuesday night, Sept. 9, by the Consolidated Edison Co. to a meeting of manufacturers, dealers, and service men.

The company, for which the name "Consolidated System Cooperative Appliance Service, Inc." has been suggested, would assume full responsibility for all servicing and repair of appliances used on the lines of the Consolidated Edison System Companies. "Cooperating dealers," according to the plan, would be permitted to participate in this plan by being designated as depots where appliances for repair may be brought by customers.

In addition to this repair service, according to the plan, the company would undertake servicing agree-

(Concluded on Page 11, Column 1)

Scott Heads Fedders Conditioning Sales

BUFFALO—Clarence E. Scott has been appointed sales manager of the air conditioning division of Fedders Mfg. Co., to succeed Edmund R. Walker, who recently was promoted to assistant general manager of the company.

The appointment places Mr. Scott in charge of sales of Fedders unit

(Concluded on Page 2, Column 2)

All-Dealer Display Aimed At Easing Product Shortage

ST. LOUIS—Something new in appliance retailing, designed primarily to help the dealer who has no appliances to demonstrate through lack of delivery under the defense program, is the new "all-dealer" display room which Westinghouse recently opened at 612-614 Kings-highway Blvd. here.

This is a new 50 x 90-foot building converted from two former stores in the George Washington hotel building, with a modern glass facade, postless display windows, and fluorescent lighting. Sectionalized departments are provided for refrigerators, ranges, washing machines, commercial refrigeration, and pack-

(Concluded on Page 12, Column 1)

Gundell Shifted To G-E Appliance Dept.

BRIDGEPORT, Conn.—Glenn Gundell, for the past five years manager of advertising and sales promotion activities for the General Electric air conditioning and commercial refrigeration department, Bloomfield, N. J., has been transferred to the advertising division of G-E's appliance and merchandise department here.

Succeeding him at Bloomfield will be Ernest Macaulay, a member of

(Concluded on Page 12, Column 1)

Refrigerator Standards To Mean Fewer Models

WASHINGTON, D. C.—Progress in the development of what will be known as "the American Emergency Standard" for household electric refrigerators, in which the number of types of refrigerators will be

(Concluded on Page 2, Column 1)

Defend Our Dealers And Wholesalers

OPM's Advisory Committee for Air Conditioning and Refrigeration has an important task, an enormous task—the job of gearing the industry's manufacturing facilities to the rapidly accelerating rearmament program. It's a job so tremendous that it will give full range to the talents of the high-calibered men who compose the committee.

There's another job that needs doing, however, and one which interests the NEWS and the great bulk of its subscribers. That's the job of seeing to it that the fine "small business" firms which comprise the industry's dealer, distributor, and jobber body get enough business to keep their doors open "for the duration."

When one member of the OPM committee asked if the agenda would include consideration of dealer problems, he received a negative answer. That would be "outside the area" of the committee's activities. This committee is concerned with manufacturing, not distribution.

Now, distribution is the matter nearest our hearts. And distribution is going to be the biggest problem for America after this war is over. Any kind of post-war planning must include keeping intact the nation's best selling organizations.

To study this pressing question, members of the industry—dealers, distributors, jobbers, and service men, as well as manufacturers, will meet in the offices of AIR CONDITIONING & REFRIGERATION NEWS today.

We sincerely hope and trust that their deliberations will arrive at a means of attack on this problem. This industry's biggest "defense" job is defending its merchandisers against threats of extinction. The time to act is now.

GEORGE F. TAUBENECK, Editor

Steel Shortage Forces Layoff of G-E Workers

ERIE, Pa.—Shortage of steel for use in making refrigerators has resulted in the temporary lay-off of 800 employees in the refrigerator department of General Electric Co.'s Erie works. Normal employment in the department is 3,200 workers, so

(Concluded on Page 12, Column 2)

Servicemen Move To Save Freon In Use

MINNEAPOLIS — A resolution urging all food dealers and users of commercial refrigeration equipment to have this equipment checked to avoid loss of "Freon-12" gas wherever possible because of the shortage of this refrigerant for civilian use

(Concluded on Page 12, Column 5)

OPM Committee For Industry Has Production Job

Repair Parts Priority Order Said To Be On Nelson's Desk

By George F. Taubeneck

WASHINGTON, D. C.—Charles Shearman of OPM's Division of Purchases, conducted his first meeting with the 64 members of his Industrial Advisory Committee to the Air Conditioning and Refrigeration Section in the Federal Trade Commission building here Sept. 4.

Members of the committee and of the eight subcommittees are named on the chart at the bottom of this page. Names marked with an asterisk are "discussion leaders" of their respective subcommittees.

It was emphasized that this was an "informal committee," and that the members were not "officers of the government." It was also indicated, rather guardedly and somewhat nebulously, that so long as the committee stayed "within its area" the Department of Justice would not at some later date prosecute the members for violation of the Anti-Trust Laws.

After a question-and-answer, "get-it-off-your-chests" session, Mr.

(Concluded on Page 12, Column 1)

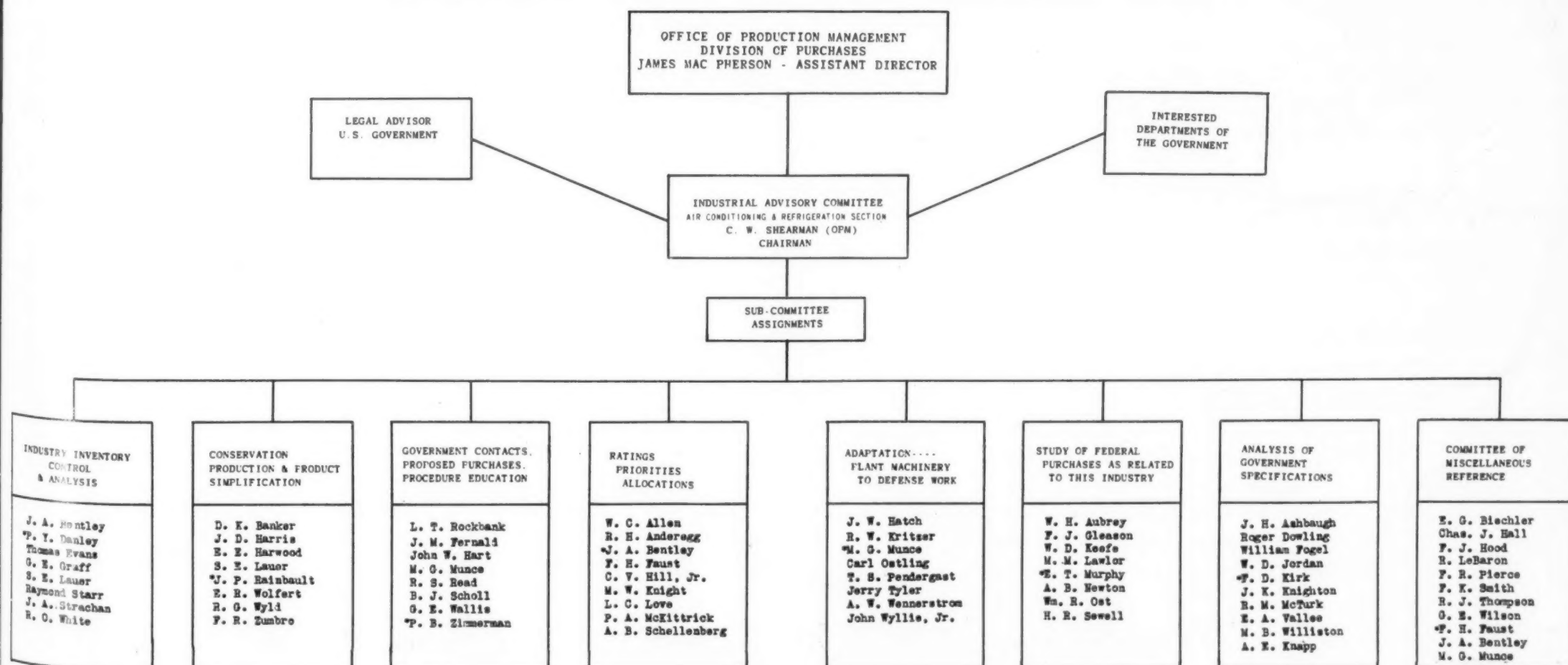
Kold-Hold Buys Savage Truck Plate Division

LANSING, Mich.—Kold-Hold Mfg. Co. here has purchased the entire truck plate division of Savage Arms Corp., Utica, N. Y., reports J. R. Tranter, Kold-Hold president. The transaction includes all of the division's machinery, patents, and goodwill.

Kold-Hold will continue to service

(Concluded on Page 12, Column 5)

Functional Operating Organization of Industrial Advisory Committee To Air Conditioning and Refrigeration Section, Division of Purchases, OPM



Asterisk denotes "discussion leaders" for each of the subcommittees designated in the chart.

A.S.A. Standards For Refrigerators Aimed To Reduce Models

(Concluded from Page 1, Column 2)
reduced and "unnecessary accessories" eliminated, has been reported by the Civilian Supply section of the OPM.

The drafting of the "Emergency Standard" is being carried out by the American Standards Association. The request from the government agency asked for a standardization program that would include: Concentration on a small number of sizes, "perhaps but two or three" and "Minimum performance requirements for the protection of the purchaser."

An ASA announcement said the purpose of the program is "to assure the public of the serviceability of electric household refrigerators in the face of shrinking supplies of raw materials, and to cut down all unnecessary variety in sizes and styles to conserve production facilities."

"There is an immediate need for standards for electric household refrigerators," OPACS wrote to the ASA. "Such standards would be of very definite advantage both to the purchasing public and to the industry in meeting the serious dislocations brought about by the exigencies of national defense."

"Such a standardization program should bring about important economies in production and distribution."

Heads Division



CLARENCE E. SCOTT

Scott Directs Fedders Air Conditioning Work

(Concluded from Page 1, Column 1)
heaters, heating and cooling coils, and air conditioning units.

Mr. Scott has been associated with York Heating & Ventilating Co., Philadelphia, as research engineer, with Carrier Corp. as manager of the unit heater department, and most recently as manager of the radiation and unit heater department of Warren Webster Co.

GET TOGETHER IN A TOWN MEETING!

Dig Out the Facts, and Then Shout Them To Your Congressman, Advises Small Businessmen's Leader

By DeWitt M. Emery, President, National Small Business Men's Association

For the past several weeks I have been traveling almost all the time and while my contacts were mainly with small business men I talked with men and women from all walks of life from day laborers to corporation presidents. The result of all of these conversations can be summed up in one word, confusion. I doubt if there ever was a time in the entire history of this country when such a large percentage of the people were so utterly confused, so hungry for facts, and most of them haven't the slightest idea where to turn to get the facts.

I can't think of anything which will be as helpful in clearing the national atmosphere, nor which will do more in straightening out the confusion in the minds of the people than a series of town meetings up and down and across the country. These meetings will also be quite helpful to members of Congress as it will put them in much closer touch with the folks back home, therefore, enable each one to more accurately represent the wishes of his constituents.

Last week I visited a mid-west town of about 12,000 people, where such a meeting would be a "God send" to practically every one in the town. This town has two factories

both in the same line of industry. About 80% of the employables in the town are on the payroll of these two factories and the other 20% of the employables—the grocers, the butchers, the druggists, laundries, dry cleaners, filling stations, restaurants, and so on—are rendering service to the 80%.

It has recently become common knowledge in this town that unless there is a change in the present trend mighty quick, both of these factories will run out of materials, one in about 30 days and the other in not over 45 days and have to shut down, thereby cutting off the income of the entire community.

Is it any wonder these people are worried? Is it any wonder they are asking "What's to become of us?" Can't you readily understand their wanting to know for sure that the great sacrifice they are about to be called on to make is necessary and justified? Also they want to know why the Canadian branch of one of these factories has all the materials it needs notwithstanding that Canada is at War and the United States isn't.

BE ARTICULATE

One of the principal difficulties is that not nearly enough of the people in the United States are articulate. Altogether too many of them fuss and fume, cuss and grumble among themselves and that's all, they don't do anything about it. Here's an opportunity for everyone to exercise his right of citizenship sometime other than on election day. Take advantage of it each and every one of you.

Often times you hear someone say that Congress is hopeless, just a bunch of rubber stamps. It's true that some Congressmen, and Senators too, are rubber stamps, don't do any thinking for themselves and always vote as they are told, but the vast majority of them are honest, highly intelligent, capable, industrious, and work a whole lot more than 40 hours a week doing their level best to accurately and satisfactorily represent their districts.

'EAR TO THE GROUND'

There isn't even one member of Congress who doesn't have his ear close to the ground all the time and who doesn't react quickly to sentiment back home. That sort of puts the shoe right on your foot, doesn't it? Which, incidentally, is exactly where it belongs.

Don't blame Congress or the Administration or anyone else except yourself. We are a self-governing people and anytime we don't get the kind of government we think we should have it's up to us to say so.

In all probability most of the suggested town meetings, I urge you to hold one in your town, will revolve around Peace or War, Priorities, Lend-Lease, Taxes, the Draft, Labor, and so on because these are the things in which everyone is interested. In every community there are people on both sides of all of these questions which is as it should be.

RUNNING THE MEETING

Care must be exercised, however, to see that neither side runs away with the meeting. If the interventionists want to hold a meeting which is advertised as such, that's all right and by the same token, if the isolationists want to hold a meeting, that's their privilege. But the meetings I'm recommending are for everyone and therefore in order to be successful must be conducted on a fact-finding basis.

It therefore is desirable for those of you who set up the meetings to keep the fact-finding idea firmly entrenched in the far front of your minds from the very beginning. The purpose of the meetings is to find out for sure what's what and why. Then when accurate factual information is available to guide you, each one can make up his mind concerning what he thinks should be done about it. And I, for one, am ready to trust the considered judgment of the American people on anything.

There probably isn't any one thing in the entire picture which, directly or indirectly, is causing greater concern to more people than priorities

and on it there are two schools of thought. One school, which is typified by Mr. Henderson, believes that everything should be subordinated to the production of war materials.

If 5,000 or 50,000 small businesses are put out of business and from two million to 10 million men and women thrown out of work, that's too bad but it can't be helped. The other school of thought, typified by Mr. Knudsen, believes that the transition from peacetime to wartime production should be handled carefully with as little disruption to the flow of regular production as possible, at the same time keeping in mind that it is necessary to rapidly increase the production of arms of all kinds.

ENGLAND DOES BUSINESS

This is a mighty important question and the way it is handled will have a profound effect on the lives of all of us for many years to come. England, even though fighting for its very existence, has been able to carry on a considerable volume of "business as usual" not only for home consumption but also for export markets. We know, for any number of reasons that this is true; two of these reasons will be enough to serve our purpose.

The June 1941 issue of the British Export Gazette, a 50-year-old publication, published in London, contains advertising offering for immediate delivery, "paper and rubber, insulated cables and wires, electric meters, overhead equipment for railways, tramways light and power, copper and aluminum, sheets, electric welders, magnetic moulding machines" and so on through a long list.

This same advertisement states "The best British goods have been delivered in the past; the best British goods can be delivered now." As guarantee of delivery, a picture is shown of the British Navy escorting a convoy of merchant ships.

The other reason we know that England is carrying on "business as usual" is that a few days ago the British Government, through John Maynard Keynes, promised the American government that "England no longer will sell in Latin America goods she has received from the United States under Lend-Lease."

EVERYONE'S IN BUSINESS

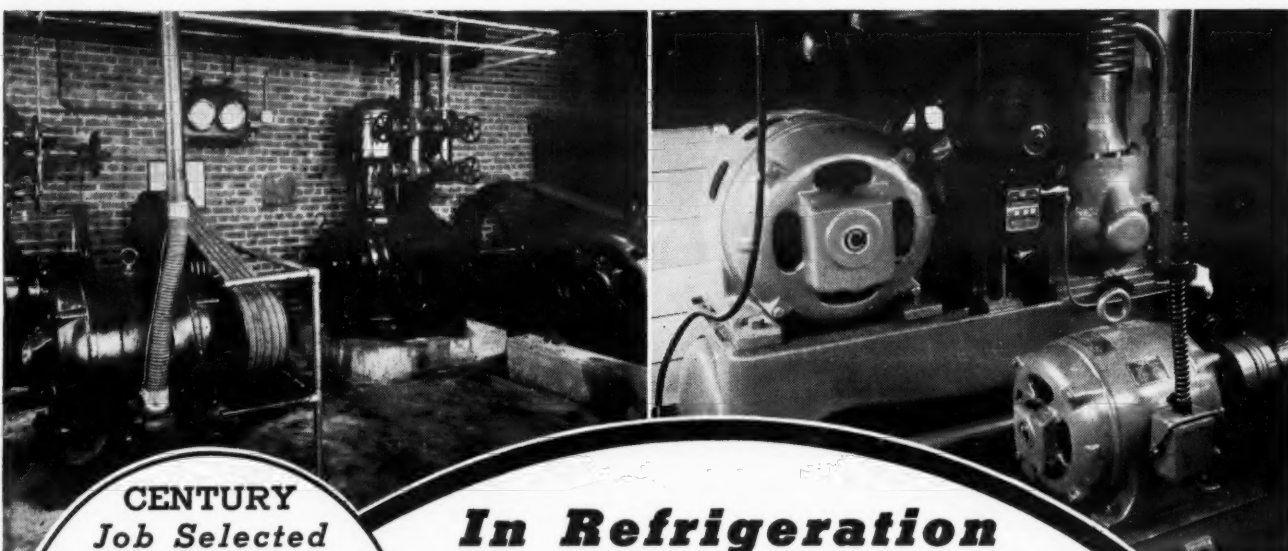
I mention this because if Britain, in an admittedly much worse position than this country, can still find materials and manufacturing equipment to carry on "business as usual," it might not be a bad idea for us to follow their example.

This, I think, is particularly true when we consider that everyone in the United States, directly or indirectly has a stake in business. A school teacher sells his or her services on a contract for so much per year. Making the contract is a business transaction and the money to pay the salary the contract calls for usually comes from taxes collected from business. A surgeon performs an operation and renders a bill; that, too, is a business transaction. When a farmer sells a dozen eggs or a bushel of wheat, he's "doing business." When a laborer or a skilled mechanic applies for a job and is put on the payroll at so much an hour, day, week, or month, that, too, is a business transaction. So it isn't a bit of an exaggeration to say that we are all in business.

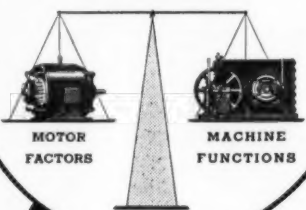
The condition of the plants, factories, mines, or shops in our community, whether or not they can keep on operating, is a matter of major importance to that community and when all of these communities are added together, keeping the factories in each one in operation, employing millions of people and paying out billions of dollars in payroll, is a matter of major importance to the entire country. We are really all in business.

KEEP CONGRESS INFORMED

Your congressman needs your advice and counsel just as you need his; don't deprive him of it. We all know that the Constitutional Government we have in the United States is the greatest blessing ever bestowed on mankind any place on earth. Let's not let anything happen to it.



CENTURY
Job Selected
MOTORS



**In Refrigeration
and Air Conditioning
It's Helpful and
Profitable to Rely on**

CENTURY Job Selected MOTORS

When you buy or specify a Century Job Selected Motor for any application in the fields of refrigeration or air conditioning, you're assured that the motor accurately meets the demands of its job and the surrounding conditions.

For instance, Century Type SCN, low starting current, normal starting torque, squirrel cage motors are designed especially for use where lower starting current is desirable — for blowers, unloaded compressors, cooling towers, centrifugal pumps, etc.

Century Type SCH, high starting torque, low starting current motors are especially suitable for refrigeration compressors, reciprocating pumps that start against pressure, and similar equipment where heavy starting loads are encountered.

Century Job Selected Motors balance the job; are a definite aid to sales and contribute much to the efficient operation of your equipment or installation. Consult your nearest Century Motor Specialist today on Job Selected Motors.

CENTURY ELECTRIC COMPANY

1806 Pine St., St. Louis, Missouri

Offices and Stock Points in Principal Cities



One of the Largest Exclusive Motor Manufacturers in the World

'A Fishy Eye For Big Orders'

Personal Visit To Customers Who Tend To Over-Order Is New Duty For Jobber

ST. LOUIS—If excited dealers and service firms order supplies far above their normal needs because they fear shortages, jobbers will find their stocks depleted and customers turning away, so Authorized Refrigerator Parts Co. here is attempting to dissuade its customers from making excessive purchases.

The firm is experiencing considerable difficulty in obtaining replacements for stock sold, so the management is tightening up on credit and examining every order with care before filling it. H. F. Brockgeitens, L. W. Kreuger, and H. D. Ayers operate the company.

"Dealers are prone to become excited over the government reduction of manufacturing of parts and appliances," explains Mr. Brockgeitens, "and to order ahead for reconditioning and service work for several months."

"Although we naturally like to get the business, we can't afford to sell ourselves out and lose the goodwill of the later customer who needs parts badly and finds we can't supply him. Consequently, we're taking the stand of discouraging too large orders, and investigating any we receive which appear out of balance with the ordinary requirements of the dealer."

If, for example, an order is received for 50 expansion valves from a dealer who ordinarily orders only five at a time, Mr. Brockgeitens or one of the other two partners immediately makes a personal call on the dealer to see if he can get along with less. Of course, many of these larger orders are the result of defense contracts, in which case the dealer gets immediate delivery. But if the dealer is merely "scared," Mr. Brockgeitens

diplomatically informs him that Authorized Refrigerator Parts cannot fill the entire order.

"We don't make an issue of this, but simply explain the facts and appeal to the dealer's sense of fairness to understand why it is difficult for us to jeopardize our inventory," adds Mr. Brockgeitens. "Usually he is willing to admit that we injure ourselves by following out his desires for more parts, and is willing to rescind part of the order."

Authorized Refrigerator has studiously avoided circularizing its customers with information regarding possible parts shortages, because this might arouse dealers' anxiety.

Those firms conducting a large-scale operation in reconditioning and promoting used refrigerators are most likely to be hit hard by any shortage, believes Mr. Brockgeitens.

Building Rents Room Coolers To Tenants For \$35 Every Season

St. Louis Doctors and Dentists Are Chief Users

ST. LOUIS—So satisfactory was last year's plan for renting room coolers during summer months to the doctors and dentists who occupy offices in the Beaumont building here that the building management added 10 more renters this year to the 30 original users, each of whom "came back for more."

Designed solely as "rent insurance" for Real Estate Management Co., operator of the building, the plan calls for renting to tenants 1½-ton Carrier window-type room coolers from June 15 to Sept. 15.

A flat rate of \$35 is charged for the three-month period, and tenants have to pay the individually metered electric bills. Renters, however, have no responsibility for the units, other than damage caused by carelessness. The management company handles the installation, maintenance, service,

removal, and storage of the conditioners, as well as the removal and reinstallation of the office radiators which the conditioners replace during the summer.

No direct profit from renting the room coolers is sought by the management company, for the object of the plan is to rent the offices and keep them rented. That much has been accomplished already; the building is 100% occupied and there is a standing list of prospective tenants for years to come.

The \$35 charge for the conditioners, while representing no profit, is enough to cover all expense of service and maintenance, in addition to making the coolers pay for themselves in a 10-year period.

In installing the units there is no interference with the raising of windows. This makes for operating

economy, as there are numerous cool days during the summer when the conditioner can be turned off and the windows opened to provide comfort.

This service has so far been extended to tenants of outside rooms only. Inside rooms are given a certain amount of protection from the intense summer heat due to their protected location. They also receive some cool air which overflows from the air conditioned rooms. The office rooms are 8½ by 11 feet in size.

The conditioners were sold to the Real Estate Management Co. by Sears & Piou, St. Louis Carrier distributor, and are serviced and maintained on a bi-weekly basis. Arrangements have been made by the management company to add coolers as tenants request them at a group price which includes inspection and warranty service, thus rapidly amortizing the costs involved.

Krumrei Heads Sales

OMAHA, Neb.—Carl Krumrei, Jr., has been appointed general sales manager of the H. C. Noll Co., local Philco distributor.

Right now, refrigeration engineers face a

SERVICE OBLIGATION AND AN OPPORTUNITY

IN INSURING THE NORMAL SERVICE OF EQUIPMENT EMPLOYING "FREON-12"

Why there is a shortage of "Freon-12"...

Our plant is producing as much "Freon-12" as ever—as much as the supply of one of the essential raw materials will permit. Defense needs for refrigeration and air conditioning equipment, however, are taking a large portion of this production.

You can relieve this situation...

Based upon careful estimates, it is believed that if waste and losses are eliminated, the saving will compensate for existing shortages. This is your opportunity. You can increase your business, and at the same time perform an invaluable service for your customers, by making regular check-ups to conserve "Freon-12."

4 major causes of waste and losses...

Study the check list at the right to make sure you utilize every possible means of combatting these four sources of waste and losses:

- (1) Leaks
- (2) Overcharging Systems
- (3) Incomplete removal of "Freon-12" from cylinders
- (4) Purging "Freon-12" into the air

How to minimize leaks...

"Freon-12" is no more difficult to hold than any other refrigerant under the same pressure. In fact, under such conditions the leak may be less. But because "Freon-12" is safe, odorless and non-irritating, the same care is not always exercised as when using other refrigerants. But you can easily minimize "Freon-12" leaks by following the prescribed procedure. (See check list.)

What "Freon" conservation means to you...

A regular check-up service is important. It will conserve "Freon-12" essential to the continued operation of much of your customers' refrigeration and air conditioning equipment. And this is also an excellent opportunity to establish a customers' appreciation of a regular check-up service. Send for our folder giving detailed instructions for handling the servicing problems of various fields. Kinetic Chemicals, Inc., Tenth & Market Streets, Wilmington, Delaware.

Check List FOR CONSERVATION OF "FREON"

Do not overcharge system.

Weigh a sufficient amount of "Freon" for efficient operation.

Test system for tightness.

Use dry CO₂ or nitrogen rather than "Freon."

Evacuate shipping cylinders completely.

Condense the vapor and salvage the refrigerant.

Do not purge "Freon" into the air.

Pump the "Freon" into the receiver or into a clean, dry cylinder for reuse.

Look for accumulations of oil

which have leaked from the systems. They may indicate the presence of a leak.

Use a Halide lamp or torch to locate leaks.

It gives instantaneous reaction to even minute leaks.

Check systems at these points:

Gaskets on the crankcase cylinder	Control devices
Crankshaft bearing housing	Oil Separators
Cylinder head	Compressor
Stuffing box or shaft seal	Condenser
Valve stems and pads	Evaporator
All connections (threaded, flared, welded, brazed or soldered)	Auxiliary Control apparatus
	All castings and tubings

KINETIC
FREON
REG. U. S. PAT. OFF.

safe refrigerants

"Freon" is Kinetic's registered trade-mark for its fluorine refrigerants.

Public Opinion Split About Even Over Time Sales Curb

PRINCETON, N. J.—Forty-nine per cent of the American public would disapprove of a complete ban on instalment sales while 43% would approve, according to findings of the latest Gallup poll.

Although actually the Federal Reserve Board's regulations effective Sept. 1 are of a much more moderate nature, those interviewed were asked: "As one way to help defense production, it has been suggested that the government forbid any one buying anything more on the instalment plan until the war in Europe is over. Do you approve or disapprove of this suggestion?"

Acknowledging that "It is too early yet to tell what the American public's ultimate reaction will be to the program," George Gallup, director of the American Institute of Public Opinion which conducts the survey, commented that "it is interesting to note that even on a complete curb public sentiment is fairly closely divided." In view of this, Mr. Gallup said that the plan finally adopted "would almost certainly meet with more public approval than the drastic step of a complete curb on instalment buying."

York, Pa. Manufacturers Pool on Defense Plan

YORK, Pa.—An order for \$2,000,000 worth of ordnance equipment has been awarded by the Army to York Ice Machinery Corp. as the prime contractor, under the "York Plan" for pooling labor and machinery for cooperative community defense work.

York suggested the plan some time ago. The contract calls for 6-inch Barbet guns.

Upon opening of the bids several months ago York Ice Machinery Corp. consulted with engineers and executives of the S. Morgan Smith Co., A. B. Farquhar Co., Ltd., Brandt-Warner Mfg. Co., and other firms located in York about the practicability of this community project. York Ice Machinery will let out work to the other firms on a sub-contract basis.

Unusual Lighting Marks Display



Unusual lighting effects, a life-sized figure, and plenty of descriptive material around the various models marked this display of Philco refrigerators used this year by the Protas & Levitt Co., Seattle, Wash.

With Every Employee Selling & 'Regulars' Specializing, Sales Boom For Big Store

KANSAS CITY, Mo.—Boosting annual volume of refrigerators to more than 500 and of ranges to approximately 900 has been effected at Davidson Furniture Store here by two drastic changes in sales policy:

1.—Making appliance salesmen of the store's entire staff of 26 salespeople by means of bi-annual private cooking schools at which appliance men are hosts to the other members of Davidson's personnel.

2.—Discarding of the "interselling" plan, by which all appliance men sold indiscriminately, in favor of separate departments, each with a crew of specialty men who sell only their own appliance.

Conceived by Appliance Department Manager Henry Mankow, the cooking school is presided over by one of the appliance department managers, a manufacturer's representative, and the specialty men selling the particular appliance under study. As the meal is prepared, all selling points are explained by the manufacturer's representative.

The food is then served, with music and entertainment provided by the appliance department. Afterwards, an open forum is held, featured by a "quiz" designed by Mr.

Mankow to uncover any weak points that may puzzle the house sales staff.

The cooking school thus qualifies every salesman (or even stock boys and office employees) to sell appliances, full commission being given on every sale. Each one of the hundreds of women who visit Davidson's every day is asked to view a range or refrigerator demonstration.

Whereas all general appliances were formerly sold from a basement location by a staff of 10 salesmen, each appliance now has a separate department and a separate group of specialty salesmen. For example, there are four men in the range department, two outside and two on the floor, and six in the refrigerator section, likewise split between outside and floor men. Thus, waste motion is eliminated and every man given a chance to become a specialist, according to Mr. Mankow.

So effective has Mr. Mankow's new policy proved that the entire staff now averages from six to eight appliance sales a month (ranges leading), with the specialty men doing the rest. Refrigerators and ranges are kept spotted throughout the store.

'Balanced' Plan Seen as Best Bet for Dealer Now

Stix Will Sell Up To Keep Volume & Stock

ST. LOUIS—An important problem has been thrust upon the major appliance departments of department stores through indicated cuts in refrigerator, range, and washing machine production by OPM—one which only a "balanced" merchandising policy can meet, says R. G. DeHart, major appliance buyer for Stix-Baer-Fuller here.

Two problems must be considered, Mr. DeHart is convinced—first, maintaining volume by making a larger profit per unit sold; second, keeping enough refrigerators and other appliances in stock to retain the goodwill of customers who have bought other appliances from the store and want to continue buying there. With fewer appliances available, this becomes a job of ample proportions.

To date, Stix has not suffered from slow delivery, but anticipates a "quota" system of allotting merchandise from manufacturers which may cut deliveries from 20 to 35%. The same cut, Mr. DeHart pointed out, may be much larger in the case of small appliance dealerships, many of which, in his opinion, will not be able to remain in business without merchandise to sell. This in turn will throw a heavier load of customers on the department store appliance section.

Accordingly, Stix-Baer-Fuller has set up a new merchandising policy which will continue as long as production is limited. To protect the small-income buyer who cannot afford to pay higher prices, the store will attempt to maintain a stock of 6-foot and smaller refrigerators at low prices, by "selling-up" as many buyers as possible to more expensive models.

With fewer refrigerators in stock, the store plans to boost its "average refrigerator sale" from around \$128 to \$169 or even \$200, realizing a larger profit per unit sale, and balancing sales over the entire line.

At the same time, credit sales will be "tightened up" by larger down payments and shorter terms. With customers for the most part anxious to buy, even to pay cash, it will scarcely be necessary for the store to risk repossession and collection costs to make sales, Mr. DeHart says. Also due for a considerable reduction will be advertising expense in connection with appliances. With fewer competitive outlets, less price emphasis, newspaper advertising will not be so necessary to bring customers in.

Ground work for the new merchandising plan has already been laid in that Stix' appliance salesmen are explaining the supply situation frankly to customers, earnestly promoting larger boxes, and protecting goodwill. As a result, for the first time larger refrigerators are out-selling low-priced models. Requests for the latter are being recorded, made into a presentation, and will be submitted to manufacturers as proof that the store has a market for a larger quota of refrigerators.

Do You Know These Fundamentals of Appliance Advertising & Merchandising?

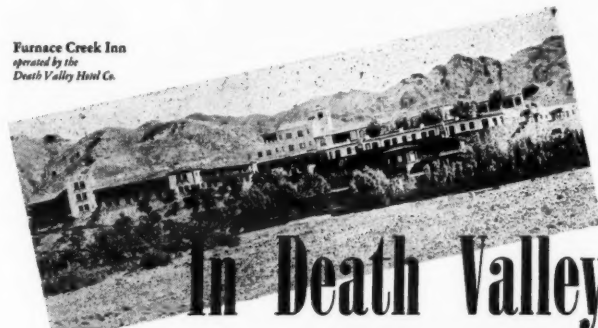
Just published by Business News Publishing Co. (publisher of Air Conditioning & Refrigeration News) is a new book "Appliance Advertising & Merchandising." (Price: \$2.00.) Written by R. E. Mangan, who for the last 10 years has been advertising manager and merchandising expert for one of the largest appliance distributing firms on the west coast, the book is full of down-to-earth information on making advertising and promotion methods pay out.

Parts of "Appliance Advertising & Merchandising"—such as that below—will be published in the News from time to time, to give readers the benefit of some of Mr. Mangan's stimulating thinking, but primarily to create a desire on the part of the subscriber to get and read this very helpful book.

BY R. E. MANGAN

(From Chapter 7 "Newspaper Layout, Copy, Illustrations" of the book, "Appliance Advertising & Merchandising.")

Furnace Creek Inn operated by the Death Valley Hotel Co.



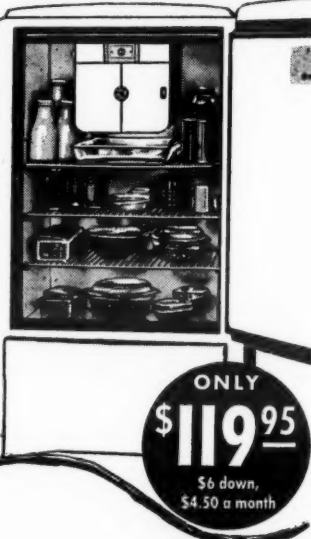
—where exacting refrigeration and trouble-free service is demanded—

G-E is the Choice

"We believe you cannot buy a refrigerator that will cost you less to own than a General Electric," states General Electric Company. And for the hottest part of the civilized globe, the Death Valley Hotel Company, for the past 10 years, has chosen G-E refrigeration equipment for all its properties. In any of the desert towns you will also find G-E the favorite—because it's quiet, thrifty, dependable, and built to stand up for years without costly service and repairs.

HERE'S VALUE!

Big, roomy 6 cubic ft. General Electric Refrigerator...11.7 square ft. of shelf space...Freezes 8 lbs. of ice...Interior 5 Years Performance Protection



ONLY \$119.95
\$6 down, \$4.50 a month

Here is an example of a dramatic way to put across a powerful product story without going into a dull story of nuts and bolts. And in this instance, the advertisement had a local flavor, which stepped up its effectiveness. We can be sure that readers of this advertisement will remember that G-E refrigerators stand up in Death Valley's heat far longer than they would laboratory tests. There is always an interesting, dramatic way to put over a sales point if you'll search for it.

DECIDE ON YOUR COPY THEME AND STAY WITH IT

You should give careful study to your advertising approach on each appliance you plan to advertise. Select your primary selling points. On refrigerators and washers they may be confined to product features and price. On such appliances as ranges and water heaters these points should include advantages of electric cooking as well as product features.

Once you've decided on the story you are going to tell in your advertising, stay with it. Tell the same story in every advertisement, because success in advertising comes from telling the same story over and over again. You can never assume that because you've said a thing in one or two advertisements it has registered on all of your prospects.

Only a small proportion of your prospects see any one advertisement. And every prospect must see the same points advertised over and over again before these points are sufficiently impressed to cause buying preference or buying action.

If your primary refrigerator selling point is low operating cost, say it in different ways, attack it from every interesting angle, but say the same thing time after time. It should be your headline in every advertisement, with your secondary selling point—a new vegetable keeper, for example—always prominently featured. Then, in your copy crowd in as many more advantages to the user as you can.

STREAMLINE PRODUCTS

TRADE MARK REG. U. S. PAT. OFFICE

These METAL CAPS
ON STREAMLINE
"SOLDER SEALED"
HARD COPPER TUBING
PERFORM A MULTIPLE

Service...

Here are a few advantages:

Our method of sealing carefully cleaned and dried copper tubing with a soldered copper cap was chosen because we consider it superior to any other method in general use.

This cap is substantial enough to resist fracture, damage or accidental tearing off through handling, unless subjected to extraordinary abuse.

It amply protects the ends of the pipe from damage and preserves its careful capillary tolerance so that it arrives at its destination in the same perfect condition as it left the factory.

The cap cannot be accidentally left on the pipe when installation is made—and it may be used again to reseal cut lengths of pipe. The cap can easily be removed when installing by heating it slightly with the flame of a blow torch or gas tip.

The cap is colored to indicate the different kinds of pipe as follows:

Government Type K—Green Government Type L—Copper
Government Type M—Red

MUELLER BRASS CO.



Your Jobber Has a Specialized Refrigeration Knowledge. He is at your Call to Help you Give the Utmost in Service.

PORT HURON, MICH.

A NEW STANDARD

The Bush Line includes a wide range of sizes and types. Write for catalog.

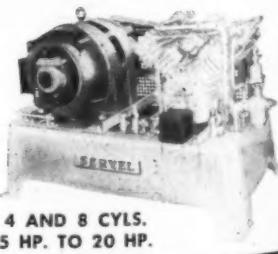
BUSH MFG. CO.
HARTFORD, CONN.
610 N. OAKLEY BLVD.
CHICAGO

COMMERCIAL COOLING UNITS by **Bush Mfg. Co.**

SERVEL MACHINES

FOR HIGH-CAPACITY REQUIREMENTS

These heavy-duty models are designed for large commercial or industrial applications. For liquid cooling, locker storage, food processing, etc. 4 and 8 cylinders. 5 to 20 HP. Available with water-cooled condensers or for use with evaporative condensers. Write for details. Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Indiana.



4 AND 8 CYLS.
5 HP. TO 20 HP.

'God Helps Those'—**Supplies Jobber Explains How Product Simplification Would Help Every One**

FRESNO, Calif.—How manufacturers, parts jobbers, dealers, and service men can help one another in the present crisis of materials by standardization and simplification of product and product labeling and by giving aid to one another where needed is suggested by G. C. "Doc" Armour of Arbell Refrigeration Supplies Co. of this city.

In a letter to the NEWS Mr. Arbell declares:

"In connection with priorities, shortages, and minuses, I was wondering if this industry of ours couldn't take this opportunity to do a great deal for ourselves.

CHANCES TO STANDARDIZE

"There are so many places where the manufacturers could get together to standardize.

"As an example—I had a call for a 1/2-hp. motor. We happened to have six in stock, yet not one of them was right. It made me see that there are a great many small jobbers in our same predicament with a good many items that don't quite fit the need.

MOTOR BASE

"Why can't we have a motor with a standardized base plate. Why can't the shaft size be standardized on all small refrigerating motors, say up to 1/2 or 3/4 hp.? When someone wants a motor pulley single groove 3 inches in diameter 1/2-inch shaft you generally have it in a 3/4-inch shaft size or vice versa.

"The same thing is true in belts. We carry a large stock of belts, yet there are times when we can't fill the bill (now, we can't get half of our orders filled). If compressor bases were made a little more uniform the service man could slide the motor back or forward at least to take the next inch size belt. Cooperation on the part of the compressor manufacturers would cut down on so many sizes.

"Belts might be plainly marked by

Republicans Appoint Congressmen To Look After Small Business

WASHINGTON, D. C.—Fearful of the collapse of this country's small business enterprises, which he pictured as deprived of a fair share of contracts, almost strangled by priorities, and stifled by regulations and taxes, Representative Joseph W. Martin, Massachusetts Republican, has appointed a Republican Small Business Study Committee to look into the problems of business and seek means to protect it against the difficulties expected to beset it in the post-war era.

The committee consists of 16 Republican members of the House. Rep. Martin claimed the loss of these concerns, which he said are "hanging on the ropes," would be a deadly blow to our prosperity and productive capacity. He pointed out that these concerns employ fewer than 200 workers each compose 99% of all business houses in U. S. and handle 65% of our commerce.

The Congressman related how, in the case of bids on serge for Army uniforms, the quantities specified were so high that only the largest firms were able to submit bids. He said that unquestionably the Army could save time by doing business with a minimum number of firms and thus cut down on inspection, but warned that "if we destroy the small businesses of the country by this method it will be a disastrous price to pay for saving a little time."

Charles Halleck, of Indiana, is chairman of the committee. Other members are: Representatives George J. Bates of Massachusetts, Margaret C. Smith of Maine, W. Sterling Cole of New York, Leonard W. Hall of New York, Albert L. Vreeland of New Jersey, Louis E. Graham of Pennsylvania, James W. Mott of Oregon, George W. Bender of Ohio, Leslie C. Arends of Illinois, Clare E. Hoffman of Michigan, Thomas D. Winter of Kansas, Walter C. Ploeser of Missouri, Henry C. Dworshak of Idaho, Usher L. Burdick of North Dakota, and A. D. Baumhart, Jr. of Ohio.

all belt manufacturers "A," "B," "C," etc. followed by the number of inches of length. This would at least save a great deal of time transposing from one manufacturer's catalog number to another.

"The seal problem could also be minimized; we have seals on hand for which we in this territory have little or no use because of shaft diameter or seal depth variations. I presume a survey and suggestions from jobbers and service engineers would produce enough ideas to cut out so much waste of materials. (I mean that each jobber has a quantity of supplies that has practically no turnover.)

HELP FROM DISTRIBUTORS

"We are 200 miles from the nearest competition, and there are in our territory a few machines of many kinds and many of a couple of other makes. The less popular makes have no local representation, or it changes so often that there is no one who carries a stock of parts and controls. Yet let the jobber attempt to help out the poor unfortunate misguided owner of said near orphan; does the manufacturer or his distributor in some metropolitan city give him any support? You bet they don't.

"This is just my opinion, what do our other friends in the refrigeration business think?

"I'm sure the old motto "God helps those who help themselves" applies to us, especially in the present emergency.

G. C. ARMOUR."

Greenville Interests To Run Deissler

GREENVILLE, Pa.—L. J. Wiesen, Sharon (Pa.) attorney representing local interests, purchased plant, machinery, and equipment of the Deissler Machine Co. here at a recent bankruptcy sale for \$27,650. Until a reorganization or final disposal is effected, the plant will continue in operation.

Flat on His Back For a Year, Jobber Salesman Still Sells

CINCINNATI—No little thing like tuberculosis of the spine can down H. G. (Red) Klugman of Williams & Co., refrigeration parts and supplies jobber here. No sir!

Ever since Sept. 1, 1940 Mr. Klugman has been flat on his back in a plaster cast in the bedroom of his home in Cincinnati's Oakley subdivision. This seemingly endless internment has been broken only by intermittent trips to the hospital for X-rays, surgery, or other special attention.

But despite all this, Mr. Klugman has not given up his work. Far from it, in fact!

So that he might keep in touch with his contacts in the field (he formerly traveled the Dayton-Columbus-Louisville territory for Williams), he had a telephone installed at his bedside.

With the cooperation of his good friend and business associate at Williams, Alfred Chadburn, he has managed to keep an up-to-date file of catalogs, product literature, and engineering data within arm's reach.

Mr. Chadburn also has seen to it that Mr. Klugman has received carbon copies of all Williams correspondence which might help to keep him thoroughly informed of current activities in the jobbing field.

All this, plus the constant help and encouragement of his wife, Ann, who has been serving in the combined capacity of housekeeper, secretary, and nurse, has enabled Mr. Klugman to keep in close touch with the industry, and to keep Williams' "Oakley branch" (as the Klugman home is jokingly referred to) going strong.

And here's the best news of all! Latest word from the specialists who have been handling Mr. Klugman's case is that he will be up and around again in four to six months.

Lockers For Spartans

SPARTA, Ill.—E. A. Beisner, local meat market proprietor, plans to invest about \$4,000 in a frozen food locker plant here.

Ultra-Violet Units For an Air Conditioned Plant

First large-scale application of bactericidal ultraviolet to air conditioning in an industrial plant was completed recently at the Hillside, N. J., plant of Bristol-Myers Co. All air passing through the air ducts at the rate of 40,000 c.f.m. is treated by 104 Westinghouse Sterilamps. The 30-inch lamps are mounted vertically a foot apart, in rows 15 inches apart, in a special chamber. Each lamp operates at 475 volts and .04 ampere, obtained from a current regulating transformer having an open circuit voltage of 3,000 volts and supplying four lamps in series. Twenty-six transformers are required for the 104 lamps.

Bristol-Myers Plant Uses 104 Sterilamps In Conditioning Job

HILLSIDE, N. J.—In what is claimed to be the first large-scale application of ultra-violet light to air conditioning in a manufacturing plant in this country, a battery of 104 ultra-violet "Sterilamps" has been installed in the air conditioning system of the Bristol-Myers Co. plant here by the Lamp division of Westinghouse Electric & Mfg. Co.

The lamps were mounted in a specially built duct of the air conditioning system. Ultra-violet rays given off by these lamps, it was explained, are of a special wave length known to be most effective against bacteria. The 30-inch-long tubes shoot rays through air which circulates through the duct at the rate of 40,000 c.f.m.

Smith, Crosley Engineer, Signal Corps Adviser

CINCINNATI—George E. Smith, vice president of Crosley Corp., has been retained by Brigadier General Dawson Olmstead, Chief Signal Officer, U. S. Signal Corps, as civilian adviser and counselor in the reorganization of certain activities of the U. S. Signal Corps.

Mr. Smith will advise and assist General Olmstead, who has just taken over his new responsibilities as chief of the U. S. Signal Corps, in reorganization and systematization activities with a view toward better and more comprehensive operation.

Mr. Smith will divide his time between the Signal Corps and Crosley Corp.

In his executive capacity at Crosley Corp., and in previous connections, Mr. Smith has had many years of organization experience.



★ DEFENSE AND THE FUTURE ★

This War of Metals!

From Washington

comes General Preference Order M-9-A, effective August 6th, removing copper and copper base alloys from General Metals Order No. 1, and placing ALL copper and brass products under mandatory Priority. In brief, this means that henceforth none of these products shall be sold until all Defense requirements are satisfied. The reason for such strict Priority Control is the anticipated shortage of approximately 700,000,000 pounds of copper for 1941 — and indications are that the available copper from domestic ores for the balance of 1941 and 1942 will be insufficient for strictly military requirements, with little or none available for civilian use. Deliveries of all copper base products for civilian usage — after satisfaction of all Defense requirements, direct or indirect — will be under the jurisdiction of OPACS.

Superior Cooperates

by rationing its fabricated copper base products from finished stocks, raw material inventories and materials now on order, to all customers — on an equal basis — and announces, as a means of conserving copper base metals, heavily plated steel flare nuts for prompt delivery in limited quantities.

We Predict

wholesale cancellations of non-defense orders by ALL producers and fabricators of all copper base products, (regardless of how long these orders may have been booked), as production schedules are rapidly being jammed with Priority orders to a point where no material or machine facilities will be available for completion of orders for civilian use.



SUPERIOR VALVE & FITTINGS COMPANY

VALVES, MANIFOLDS, ACCESSORIES AND FITTINGS for the Refrigeration Industry

PITTSBURGH • PENNSYLVANIA

Air Conditioning & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office;
Established 1926 and registered as
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F. M. COCKRELL, Founder

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SEPTEMBER 10, 1941

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Refrigeration Is Essential To America's Health And Efficiency

OPM Committee Has Big Job

OPM has appointed its advisory committee for air conditioning and refrigeration (see story on page 1), and seems to have done a good job of it. There perhaps is a preponderance of Eastern and big corporation names, but no one can deny the talents of individual members. They are all men of proven capacities.

Those who attended the first meeting also evinced thoroughgoing approval of Charles Shearman, the OPM man for whom this committee is working. He was a distinct surprise. He looks, talks, and acts like a business man. His sincerity and his sympathy, and his willingness to "go to bat" for the industry were obvious to all.

If he hadn't mispronounced the name of the most powerful man in the industry one might have guessed that he had been connected with the refrigeration business for years.

The industry will expect big things of this committee. Big things need to be done. Time is slipping by too fast. The job ahead will tax the energies and the minds of all those chosen by OPM to work out the industry's destiny.

Each of the eight subcommittees has its assignments. But we suggest, humbly, that there are two things for which the committee should work immediately.

- (1) A supply of copper from the now-closed deep mines.
- (2) Diversion of carbon tetrachloride supplies to the manufacturers of "Freon," so the latter can resume full production.

Of all the shortages in the industry, the curtailment of copper and "Freon" appears to have hit manufacturers and jobbers the hardest, judging by their communications with the NEWS. And

the interesting and encouraging part about it is that copper and carbon tetrachloride can be had without disturbing the rearmament program. A simple order will do the trick.

Top Cargo Space

ALTHOUGH the NEWS has lost contact with a number of subscribers in nations overrun by Hitler's Hordes, it has been most interesting and most encouraging to note how little our foreign circulation has fallen off since the war began.

Subscribers in England, Russia, Turkey, Spain, Switzerland, Sweden, and France continue to get their copies regularly. So do subscribers in Australia, New Zealand, South Africa, and South America.

Knowing how tight shipping space is, and how tough it is for people in the British Empire (not to mention France, Russia, Switzerland, and Sweden!) to get American dollars, we made a little investigation.

AIR CONDITIONING & REFRIGERATION NEWS, we discovered, gets "top cargo space" rating on ships leaving for British Empire ports. So do some other American technical publications.

American exchange is available in many foreign lands for renewals to the NEWS. And our own Treasury Department has authorized banks to pay from any blocked account to any publisher funds for an individual subscription to a periodical published in the United States.

In other words, information is as important in total war as men and machines.

Never before have the editors of the NEWS felt so keenly that they are doing useful work. Circulation continues to rise. Renewal percentage is now one of the highest for any publication in any field. Reader response, as measured by letters and phone calls, is at an all-time high-water mark.

Given the cooperation of the industry, the editors hope they can continue to give this essential industry the vital information it needs and wants.

How Washington Laughs At Ickes

OFFICIAL Washington is not without its sense of humor, despite the grim business in which it is engaged. And it is not above joining the rest of the country in laughter at the expense of Harold ("Donald Duck") Ickes.

Currently the Ickes joke circulating among Washington's bureaus has to do with Horrorstricken Harold and his campaign to get motorists to cut down gas consumption.

While he waves his arms and exhorts the rest of the nation to start slower, drive slower, and walk more, Ickes the Indignant continues to drive one of the longest, heaviest, fewest-miles-per-gallon cars to be seen anywhere.

Only John L. Lewis and Vice President Henry Wallace, to the knowledge of this writer, ride in land yachts which can compare with the Ickes limousine in size. When these cars drive up to the curb, you expect the chauffeurs to throw out gangplanks.

Well, anyway, here's the story:

Ickes drove up to a gasoline filling station, and asked for 30 gallons of

They'll Do It Every Time

By Jimmy Hatlo



gas. Observing that the engine was still running, the gas station attendant asked Ickes' chauffeur to cut off the ignition.

"Can't," growled the chauffeur. "Darned thing's too hard to start."

Shaking his head, the gas station man went back to his pump. Pretty soon he came back to the chauffeur.

"You'll simply have to shut that engine off," he said. "I'm losing out back here."

LETTERS

SUGGESTS EDITOR CALL MEETING OF INDUSTRY

Superior Valve & Fittings Co.
1509 West Liberty Ave.
Pittsburgh, Pa.

Editor:

Somehow or other I get the impression that you and a lot of others are waiting for some leader to pop up and call a meeting where every representative of every branch of the industry would be present and very briefly lend his advice to the end that a plan could be developed and an organized plea made to the "Great White Father" in Washington.

I am wondering, Mr. Editor, if you are not overlooking the fact that perhaps a great majority of the industry are looking for a leader, and you in turn are looking over their heads. Why not look in the mirror and perhaps you will see the leader reflected there?

I am suggesting, Mr. Editor, that perhaps you are the leader and that the industry needs only a spark to set it off, and that spark could be in the form of a call for a meeting and a call for an organized effort. I think you would be surprised how many would attend and lend their best efforts. Don't you remember how the nucleus of REMA was formed within the very structure in which you do business? The jobbers association likewise was born at the same time and place. They only needed to be called to a meeting issued by your worthy predecessor.

Perhaps you are too modestly thinking of your own place in this picture, or perhaps you are unconsciously considering yourself a separate or minor part of a whole, that can be likened to a great many segments of the industry who consider each of themselves as a faction or as a separate, not integral part of a bigger industry than that in which we are immediately engaged.

This industry is chock full of good leaders—they only need the spark of encouragement to blast them into action.

J. S. FORBES
President

'WILL BE GREAT HELP TO THE INDUSTRY'

Ranco, Inc.
601 W. Fifth Ave.
Columbus, Ohio

Editor:

I find that it is now necessary for me to go to the West Coast and it is impossible for me to attend the meeting which you are having on Sept. 10.

I wish you the best of luck in what you are doing because I am sure that it is going to be a great help to the industry.

G. E. GRAFF,
Sales Manager

MANUFACTURER ALSO SAYS, 'WRITE YOUR CONGRESSMEN'

(800 copies mailed)

Refrigeration Economics Co., Inc.
Engineers and Manufacturers, specializing in
Complete Refrigeration and
Air Conditioning Systems
1232 Second St., N.E.
Canton, Ohio

URGENT

Commercial Refrigeration Users
Gentlemen:

As matters now stand, you can buy no more refrigerating machinery or equipment, or at least that will soon be the case unless you do something about it.

Our commercial refrigeration is absolutely essential to preserve public health and conserve our food supply, and as such is just as necessary for defense as guns, planes, and battleships. In fact, refrigeration is defense for our health and food supply and thus for the entire country.

Just think of the spoilage you have when refrigeration is broken down for a day or two, and try to imagine doing business without it.

Yet that is what our Administration and Congress will bring on by their restrictions on materials necessary for refrigeration. Aluminum, copper, steel, zinc, "Freon," etc. are practically unobtainable except by priority and the refrigeration industry can't get priority for your commercial or domestic needs.

You can do something to correct this blunder. Write your congressmen or senators or both and do it now.

You may have a better argument but if not simply copy the paragraph underlined above and add "We must have refrigeration and expect you to convince the Administration that materials must be allotted for that purpose."

Yours for better refrigeration and enough of it, made in Canton.

F. M. BENNETT,
President

Memo from the desk of F. M. Bennett:

"SILLY, ISN'T IT? SILLY?
HELL, IT'S TRAGIC!"

And that would make a fine by-word for the industry.

Will the author please preach my funeral sermon? I'm sure there would be a laugh in it. Maybe I could wake up and laugh, too.

F.M.B.

CONGRESS SHOULD TAKE CARE OF BUSINESS HERE

Tyler Fixture Corp.
Niles, Mich.

Editor:

Congratulations on your splendid editorial, "This Is A War for Foreign Trade." You have stated the situation clearly, fairly, and with judicial calm.

Please keep up the fight to wake up Americans to the fact that they must prevail upon Congress to take better care of business right here in United States instead of demoralizing it to where we will be playing second fiddle to the British Empire forever and a day.

JERRY TYLER,
President

Eggs Kept Fresh By Air Conditioning At New Eastern Poultry Auction Market

Closely Controlled Temperature & Humidity Reduce Evaporation, Maintain Quality

TRENTON, N. J.—“Air conditioned” eggs, kept fresh and in perfect condition by closely controlled temperature and humidity, will be the feature item offered at the new egg and poultry auction market building to be opened Sept. 11 at the Tri-County Farmers' Cooperative Auction Market, Highstown.

Faced with the necessity for larger quarters to accommodate their expanding business, cooperating farmers who operate the market's poultry section decided to incorporate the latest findings of air conditioning research as they apply to food storage into the design of their new reinforced concrete building.

Other New Jersey cooperative auctions established at Flemington, Vineland, Mt. Holly, and Paterson, are reported to be considering similar installations.

IDEAL STORAGE CONDITIONS

Object of the air conditioning is to provide temporary storage as close to ideal as possible so that really fresh eggs may reach the city family with all the goodness that is enjoyed by those who keep their own hens or live within easy access of such a supply.

The freshness of a normal egg is largely determined by the size of the air space at the large end. As the egg ages and its original content of moisture is reduced by evaporation, the air cell becomes larger. New Jersey's “Fresh Egg Law,” enforced by the State Department of Agriculture, which supervises inspections at the auction markets, requires that this cell be no deeper than one-quarter of an inch if the egg is to be sold or advertised as “fresh.” Humidified air of proper temperature reduces the rate of evaporation, keeping the air cell small and maintaining the most desirable consistency of the egg white.

“Humidity and temperature control in the temporary storage vault will not be a compromise to permit delay in the streamlined marketing methods that the New Jersey auctions have used to speed up the delivery of high quality fresh eggs to consumers,” stated State Supervisor of Poultry Products Marketing Gerald E. Zich.

CONDITIONING IS SAFEGUARD

“Air conditioning will provide an extra safeguard of the auction market's ‘protective custody’ during the interim between delivery by the farmers and sale to the distributor who rushes the eggs to his trade. Actually, eggs will be held only 24 to 48 hours at a constant temperature of 60° F. and a relative humidity of 85%,” said Mr. Zich.

“Modern egg producers of New Jersey collect the eggs immediately after they are laid, and place them in electrically operated coolers that remove the body heat. Many quality conscious farmers have constructed underground temporary storage vaults in which they keep the eggs until time to go to market. Constantly circulating fresh air is humidified artificially to make up for deficiencies in its moisture content in these farmers' egg vaults. Deliveries from the farm to the auction market are made twice weekly, usually in the morning.

“At the market, these farm-fresh eggs will be placed in the cool, moist atmosphere of the new egg vault immediately after inspection by State Department of Agriculture agents. With full confidence in the quality of the eggs, because of the

dependability of the inspection service, the buyers make their purchases sight unseen. Only when the buyer is ready to load his truck will the eggs be taken out of the vault, so that no undesirable exposure is risked. Some buyers' trucks are insulated for further protection against temperature extremes and dry atmosphere while en route to retail stores and consumers.

“A number of stores retailing these eggs are completing the protective link from farm to consumer by installing equipment to keep eggs fresh and at their best. Simple refrigeration, keeping the eggs away from other foods that might impart undesirable flavors, is ordinarily satisfactory for the temporary storage of eggs at home before they are used,” Mr. Zich pointed out.

John Morse Dies In Auto Crash

CHICAGO—John Morse, son of Robert H. Morse, president of Fairbanks, Morse & Co., was killed Aug. 22 when the automobile in which he was riding collided with a bus in a dense fog on the approach of the Golden Gate Bridge at San Francisco.

Mr. Morse was 25 years of age. Since last April, when he resigned from the U. S. Navy because of an eye deficiency, he had been assistant manager of the San Francisco branch of Fairbanks-Morse.

Fielding Robinson Joins Hazeltime Service Corp.

NEW YORK CITY—Fielding Robinson, for the past nine years manager of the Crosley Distributing Corp. of New York, has been appointed to the special developments department of Hazeltime Service Corp.

The corporation maintains extensive communication laboratories in New York City, Chicago, and Little Neck, N. Y., and has been cooperating closely with government agencies on the national defense program.

Prior to his association with Crosley Distributing Corp., Mr. Robinson was connected with RCA Mfg. Co.

G.E. Stedman Appointed Agency Vice President

DETROIT—Gerald E. Stedman, long active in the sales research, market planning, sales training, and public relations phases of the appliance industry, has been named vice president of Holden, Stedman & Moore, Inc., advertising agency formerly known as Holden, Graham & Clark.

Mr. Stedman has been associated with Parker Holden, head of the firm, since July 1.

L. M. Pickford Leaves Utility For Dealer

ASHEVILLE, N. C.—L. M. Pickford has joined the sales force of Rogers Plumbing Co., local Hotpoint dealer. For the past several years Mr. Pickford has been associated with Carolina Power & Light Co.

...“New Occasions teach new DUTIES”

The “new occasions” are here. Likewise the “new duties”. In the field of mechanical refrigeration, as in so many other fields of American industry, new demands are being made, new techniques are being called for and developed ... In solving new problems as they are presented, Universal Cooler relies on its experience and ability developed in twenty years of active participation in the growth and development of mechanical refrigeration.

UNIVERSAL COOLER CORP.

Automatic Refrigeration Exclusively Since 1922

MARION, OHIO

Universal Cooler of Canada, Ltd., Brantford, Ont.



Progress In Coil Design Exemplified By Frick Installation In Maryland Dairy

BALTIMORE — Example of the progress which has been made in the art of pipe bending and welding, and of the developments in continuous pipe coil design which have resulted from years of experimentation and practice, is the coil unit designed and built for the Baltimore plant of Western Maryland Dairy by the Frick Co.

Packed into this coil assembly are 5,500 feet of 1-inch full weight black steel pipe, not to mention a 16-inch accumulator, large headers, and ample stands. The whole outfit is contained in a space 8 feet 10 inches long, 7 feet 1½ inches wide, and only 5 feet 10½ inches high.

As the coil is to be used for cooling a blast of air moving lengthwise of the accumulator, it was necessary to arrange the pipes so that there would be no open

spaces through which the air could short-circuit.

Alternate sets of coils were staggered, and the bends were set back at the top on each bank to fit the curve of the accumulator shell. Two large down-pipes, of 3-inch size, connect the accumulator to the liquid headers at the bottom. Eight coils were shortened especially to accommodate these down-pipes.

Once the pipe bending had been done on a special machine, the coils were welded to the headers and stands. Tie-rods support each coil, and the stands are welded direct to the pipes at several places. The main suction connection, of 2½-inch size, rises from the top of the accumulator.

The coil cools some 15,000 cubic feet of air from 32 to 15° F. per minute. It is connected to a 9 by 9

compressor which maintains an evaporating temperature of 10° F. while operating at 160 r.p.m.

A purger removes noncondensable gases with certainty. The cold air is circulated over the coil by a Sirocco fan of the squirrel-cage type, driven through V-belts by a 10-hp. Century ball-bearing motor.

The coil is mounted above a drain pan, and is arranged with spray nozzles for defrosting with city water. Square ducts lead to the housing of galvanized metal surrounding the coil. Three inspection windows are provided in the casing.

Both the coil and fan are installed in an insulated room. A Frick float valve controls the ammonia feed to the coil. The suction gas passes through a liquid pre-cooler before reaching the compressor.

Air Conditioning Added

DENVER—B. K. Sweeney Electric Co., General Electric distributor here, has opened a new department for sales and demonstrations of packaged air conditioning equipment.

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Airtemp's Marketing Plans Make Good Topic For Discussion During Lull In Meeting



Between sessions of Airtemp's recent Detroit sales meeting E. R. Grace of Grace & Bement, Inc., Detroit, Airtemp's advertising counsel, engages in a lively discussion with Norman M. James and Wade Young of James & Roach, Airtemp dealer in Detroit. The man with his back to the camera is Storrs Case of Chrysler Corp.'s central sales staff.

Club's \$250,000 System Reaches Completion

ST. LOUIS—Marking completion of one of the largest privately owned air conditioning systems in the state, the Missouri Athletic club at 4th and Washington recently started up the last unit in its new \$250,000 air conditioning system.

Said to be the only completely air conditioned private club in the country, the Missouri Athletic club has three separate conditioning systems which cool all but the gymnasium, which is used only for short periods in the day and consequently was not included. The plant includes a York installation for public rooms, cocktail lounge, lobby, etc., unit conditioners for the dining room, ladies lounge, etc., and a basement duct-work system with a separate refrigeration unit for the guest rooms. The latest installation was made by Sodemann Heat & Power Co.

Conditioning Speeds Paper's Photo Work

PHILADELPHIA—Darkroom operations have been speeded up and blemishes in newspaper negatives due to variations in developing solution temperatures have been virtually eliminated by air conditioning the modern photo laboratories of the Philadelphia "Evening Bulletin."

Elapsed time from exposed negative to final print has been reduced to seven and a half minutes with the aid of air conditioning and improved processing methods. Employees have likewise benefited from the installation of air conditioning. One item contributing to comfort is the removal, by forced ventilation, of hot air and fumes generated by carbon arcs used in the printing room.

Air conditioning was first installed in the "Evening Bulletin" in 1933, when the city room and editorial offices were modernized. In 1936 the ground floor public space was air conditioned, and in 1937 a modernization program involving the entire building was begun.

Eight Carrier refrigeration units with a total capacity of 350 tons have been installed. The equipment had to be located in the circular clock tower atop the 10-story building, which necessitated the building of a "spider web" structural steel foundation to provide vibration and sound isolation.

Charles S. Leopold is consulting engineer.

18 Air Conditioned Buses Ordered For Southwest

NEW YORK CITY—Included in the 42 orders received by A. C. F. Motors Co. recently are 18 for air conditioned motor coaches. Ten are for Bowen Motor Coaches, Fort Worth, Tex.; six for Dixie Motor Coach Corp., Dallas, Tex.; and two for Denver, Colorado Springs & Pueblo Motorway, Inc., Denver.

Conduit System In New Hospital May 'Answer' Doctors

PEORIA, Ill.—Physician's objections to hospital air conditioning on the ground that recirculating air may spread disease germs from one room to another are expected to be answered by the Carrier "conduit system" of air conditioning being installed in the new eight-story wing of St. Francis Hospital nearing completion here.

When finished in September it will be the first hospital in the world using the conduit system, which provides individual control of winter and summer conditions in all of the wing's 176 private patient rooms, clinical conference rooms, private offices for the Sister Superior, and living quarters for the Bishop of Peoria Diocese.

As described in the June 25 issue of AIR CONDITIONING & REFRIGERATION NEWS, this latest air conditioning development of Dr. Willis H. Carrier consists of small cabinets in each room to be conditioned containing finned coils through which hot or cold water is circulated and nozzles for the introduction of conditioned air. Both the water and air are supplied from a central point by pipes. Each cabinet has individual control of temperature. Air is circulated only in the individual room.

Drafts, which doctors find highly objectionable in hospitals, are said to be eliminated by the conduit system. A thorough mixture of room air with air from the central plant avoids the low-temperature air streams called drafts, it is claimed. A total of 7,706 c.f.m. is handled by the entire system.

Quietness of operation, essential for a satisfactory hospital air conditioning system, is obtained in the St. Francis hospital through the use of heavier gauge metal, sound-deadening material, and a simple valve arrangement permitting adjustment for any pressure drop without noise.

Hamilton B. Dox is the architect of the hospital, and Belling Engineering Corp. acted as consulting engineers. General contractor is V. Jobst & Sons, while Crowley Bros., Inc. is mechanical contractor.

Governor of Mississippi To Have Cooled Office

JACKSON, Miss.—Installation of an air conditioning system is included in the plans for remodeling the governor's office in the state capitol here.

Norge Distributor Installs 6-Ton Cooling System

WASHINGTON, D. C.—A 6-ton Carrier air conditioning system has been installed in the main offices of Southern Wholesalers, Inc., 1509 L St., N. W., Norge distributor.

'Bon Art' Cools Its Photo Studios

DALLAS, Tex.—Bon Art Studios has completed installation of a 3-hp. Airtemp cooling unit for the air conditioning of its photographic studios in downtown Dallas.

'Blackout' Means Conditioning

Accurate Temperature Controls Required In G-E Windowless Supercharger Factory



The 1,140-ton air conditioning system in G-E's new supercharger factory is divided into six independent zones. Ductwork can be seen in this photo. Note the venturi bowl type ceiling discharges, each of which is located in the center of a 40-foot bay.

EVERETT, Mass.—Air conditioning will be operating for cooling in General Electric Co.'s new "blackout" type supercharger factory even after it's snow-time outdoors. The new defense plant is being built and operated by G-E under arrangements with Defense Plant Corp., subsidiary of Reconstruction Finance Corp.

Major portion of the internal sensible heat load in the new 400 by 500-foot windowless factory consists of heating equipment and power machinery used in the manufacture of airplane turbo-superchargers. As the building is well insulated, the amount of heat released by this equipment when the plant is operating at full capacity, plus full fluorescent lighting, is sufficient to heat the building when the outdoor temperature is only 15° above zero.

BALANCED LOAD

Consequently, the air distribution system has been sized and located to balance the internal load on cooling, with only small modifications at points of maximum heat release to allow for some lack of balance between heating and cooling loads.

Manufacture of the turbo-superchargers involves numerous very accurate machining processes on aluminum and magnesium alloys, which require close temperature control throughout the year for successful results. This had to be the primary factor in the design of the air conditioning system. As far as possible, however, every effort has been made to maintain, at the same time, conditions within the comfort zone.

Total capacity required by the system is 1,140 tons of refrigeration, which is provided by 18 General Electric 60-hp. eight-cylinder reciprocating condensing units and direct expansion coils. There are six fans which serve six independently-controlled zones in the plant. All major equipment is located in three mezzanines, centrally located with respect to load and built into the building structure, so that all machinery, ductwork, and outlets are above the 18-foot level. Each mezzanine has two machine rooms, containing the three compressors, fans, and coils for the zone served from this space. The system is designed to produce

a maximum of 11° of cooling at an outdoor temperature of 91° F., but because of the high internal sensible load, the proportion of the total capacity used for temperature change within the building on cooling is relatively low. The controls are of the pneumatic type of the most sensitive kind available, as rapid changes in indoor temperature are possible with any variation in duty of the manufacturing machinery. They must be able to meet quickly, for example, the changes which occur at mealtimes and at hours when shifts change, intervals during which a considerable amount of the machinery will be shut down.

Fresh air is introduced at each mezzanine through the roof directly above at the rate of 100,000 c.f.m., sufficient to produce four changes per hour in the conditioned space, except during cooling or heating load peaks. At such times it is reduced to one change per hour. As the building has no windows and only a very few openings, full exhaust capacity for the entire amount of fresh air introduced is provided by 18 exhaust fans located under the eaves of the building. All air in the building is cleaned by automatic air filters operating continuously. With full-time operation, there would be no opportunity to change filters when they became dirty.

AIR DISTRIBUTION

Air is distributed to the six zones through ductwork of standard construction and ceiling discharges of the venturi bowl type, located at the bottom of the building trusses, about 18 feet from the floor.

Heating is accomplished with steam coils modulated in six steps for each zone, and requires a maximum outlet temperature of only 25° above room temperature under design heating conditions. Air outlets are located in the center of each 40-foot bay, with a downward-angle discharge sufficient to provide thorough mixing of the discharge air at the floor level both under heating conditions and under cooling conditions, with a discharge temperature 20° below room temperature.

A 1,200-ton cooling tower is located approximately 90 feet away from the building. Cooling water is circulated to the condensers by a steam-turbine-driven pump, the exhaust steam from which is used in the manufacturing processes. All piping is cast iron outside of the building and welded steel inside.

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Servicing Ice Cream Cabinets and Other Low Temperature Equipment

By Arch Black and Dean C. Seitz

Editor's Note: This is the sixteenth instalment of a new section on ice cream cabinet servicing in the series of articles which covers servicing of all types of low temperature refrigeration equipment for use in retail business.

The High Side Float Valve System (Cont.)

A slight variation of the system illustrated in Fig. 8 is shown in Fig. 10. In this variation an additional valve known either as a weighted valve or liquid temperature valve has been added in the liquid line leading from the float valve to the evaporator. This valve is usually mounted in the cabinet insulation close to the evaporator.

It has two purposes—first, to prevent the liquid line from sweating or frosting by keeping the tempera-

ture of the refrigerant in it from going below 40°, and second, to automatically regulate the flow of the refrigerant from the liquid line to the evaporator.

The valve consists essentially of a vertical needle of such a size and weight that it will open when the difference in pressure between the refrigerant in the liquid line and that in the evaporator is approximately 30 lbs. or more.

A line diagram of this valve is shown in Fig. 11. This slight variation in the high side float system does not in any way affect its cycle of operation, but rather guards against the possibility of condensate or frost on the line connecting the high side float chamber and the evaporator.

ACCUMULATOR'S PURPOSE

The accumulator, which is always used on a high side float system, is usually a cylindrical container placed in the suction line. Its purpose is to make certain that the whole evaporator is used by maintaining it in a flooded condition at all times. It permits a slight flexibility in the amount of refrigerant charge in the system and at the same time eliminates the possibility of refrigerant "slopping" into the suction line.

Just as in the case of the cabinet used with the automatic expansion valve system, several materials have been used by the manufacturers as hold-over means. In some cabinets the evaporator is formed of 1/2-inch tubing soldered directly to the compartment wall without the use of any hold-over medium or congealing solution.

In other cabinets hold-over means such as stone, eutectic, or asphalt have been used.

LOCATION OF BULB

The thermostatic bulb, which controls the operation of the condensing unit, is usually located in a well. The bulb should be inserted in the well as far as it will go and sealed in position by means of a rubber stopper.

The service engineer will notice that the refrigerant charge for high side float valve system is usually measured in ounces. The accuracy of the charge is very important as will be brought out in a discussion of service problems. Either an under-charge or an over-charge of refrigerant will cause service troubles.

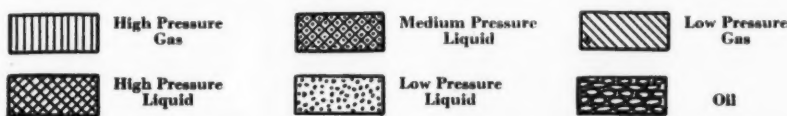
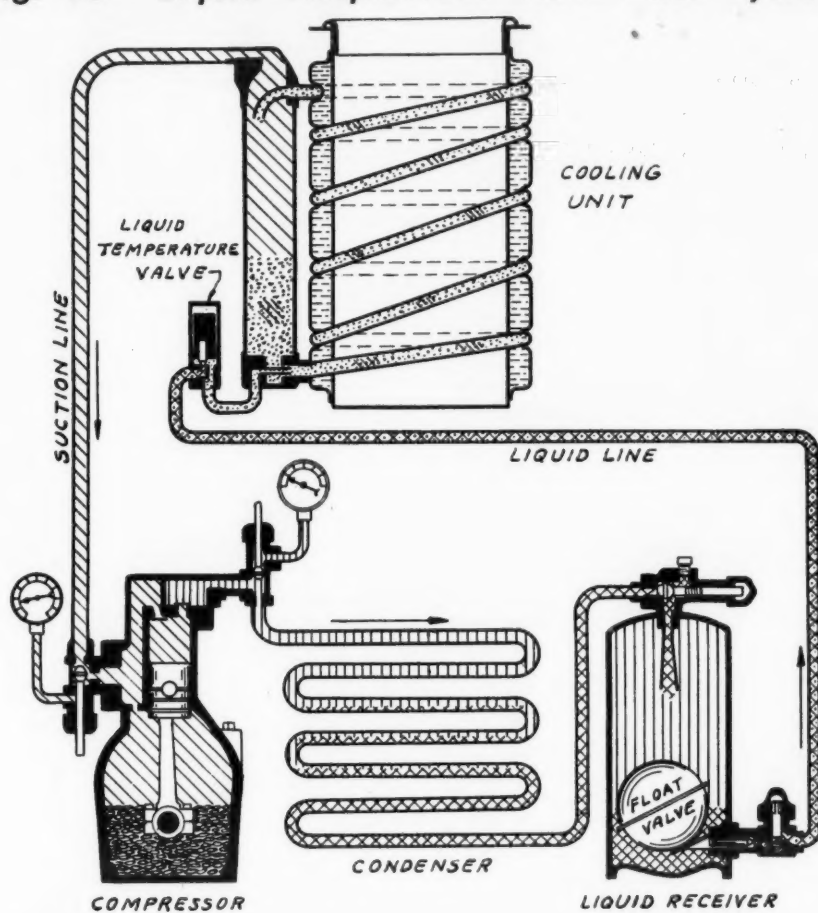
Crosley Didn't Infringe Patents, Court Rules

CINCINNATI — In an opinion handed down by the United States District Court for the southern district of Ohio, western division, certain radio receivers manufactured and sold by the Crosley Corp. were held not to infringe MacDonald patents Nos. 1,913,604 and 2,022,514 owned by the Hazeltine Corp.

The patents in suit were claimed by Hazeltine to cover primaries in antenna coupling transformers of such high inductance as to insure that the natural resonance of the antenna circuit was below the lowest frequency of the band being received. The court held that the claims were to be read in the light of limitations placed on them by the United States Patent Office prior to the issuance of the patents. The patent office had held that the claims covered only a circuit in which the primary itself had sufficient inductance to insure resonance below the band. The Crosley primaries were themselves resonant within, not below, the band and were held not to infringe.

The decision of the Ohio Federal court followed closely that of the United States District court in Delaware in a suit by Hazeltine against the General Motors Corp. holding Hazeltine's Trube Patent No. 2,111,483 for combined magnetic and capacitive coupling invalid and not infringed, and a decision by the Supreme Court of the United States in a suit by Hazeltine against Detroit Radio & Television Corp. holding Wheeler Reissue patent No. 19,744 for automatic volume control invalid for lack of invention.

Fig. 10—Liquid Temperature Valve Aids System



The liquid temperature valve (upper left) prevents the liquid line from sweating or frosting by keeping the refrigerant temperature above 40° F. and automatically regulates the refrigerant flow from liquid line to the evaporator.

Carrier 6-Months Net Tops Half Million

SYRACUSE, N. Y.—Carrier Corp. reports a net profit, before Federal income and excess profits taxes, of \$566,074 for the six months ended June 30. Net income after taxes is listed at \$290,574, equal to 74 cents each on 392,156 common shares.

This compares with a net profit of \$331,198 before taxes in the 1940 period, and a net income after taxes of \$278,698, or 71 cents on 390,808 common shares.

Unfilled orders on June 30 totaled \$8,930,000, as compared with \$4,504,000 last year.

Completed sales of Carrier Corp. for the first six months of 1941 were 39% larger than those of the corresponding 1940 period. Orders booked during the first half of 1941 were 85% in excess of those booked during 1940.

As of June 30, 1941, current assets totaled \$6,994,494, while current liabilities were \$2,674,914. Net working capital was \$4,319,580, which compares with net working capital totaling \$3,536,793 on June 30, 1940.

Solvay To Build Plant For Synthetic Phenol

SYRACUSE, N. Y.—A new plant for the production of synthetic phenol, an important raw material used in the manufacture of plastics, will be constructed here by the Solvay Process Co., subsidiary of Allied Chemical & Dye Corp. The Solvay company has developed an entirely new manufacturing process for phenol, it is claimed.

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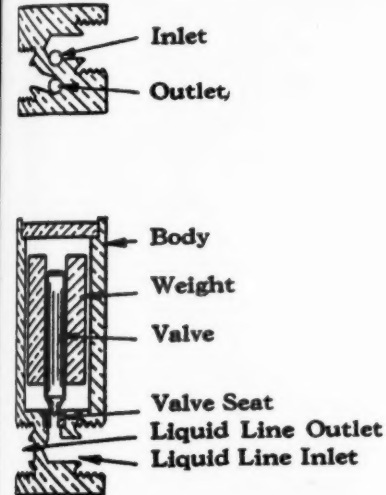
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Fig. 11—"Weighted" Valve



These top and side views of a liquid temperature valve show its construction and assembly.

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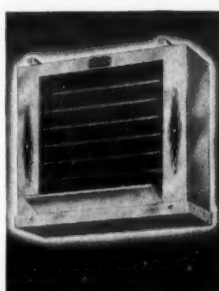
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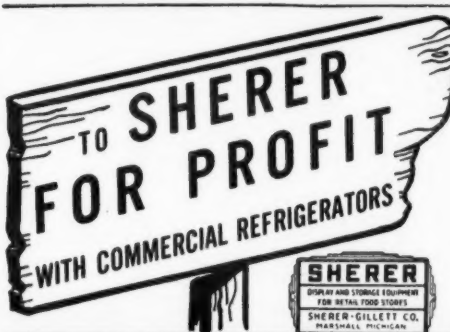
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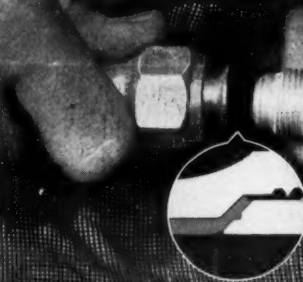
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Britain & U. S. Can Beat Nazis, Believes Morrison, But Continued Cooperation Will Be Needed To Maintain Peace

By Chester B. Morrison, Manager, London Office, York Ice Machinery Corp.

Editor's Note: This is the last in a series of articles describing life in present-day London, where business is seldom "as usual." The author, Mr. Morrison, seems to thrive on trouble and war. Previously Shanghai manager for York, Mr. Morrison left war-torn China for war-torn London shortly after the European war began in 1939.

AFTER THE WAR

I have described some of the living and business conditions now prevailing in England as one individual may see the situation, and from these observations I would like to express a few ideas about the future.

In the first place, I think that the time when an invasion of England could be attempted with any hope of success is now past. In the early part of July, 1940, when most of the British army supplies and equipment

had been lost in France, and after the defeat of France had left a single, poorly prepared country to face the full power of the German army—a large-scale invasion might have been possible.

However, when the British army had an opportunity to become re-organized and re-equipped, and when the country had accepted its new position as the sole representative of the democracies at war, any subsequent attempt at invasion would not only have failed but would have been so costly that recovery would have been impossible.

This is still true today. I feel quite certain that the spirit and morale of the people in Great Britain will hold out long enough for America to exert the full pressure of her industrial position towards the successful termination of the war. As two systems such as the Hitler system and the American system cannot exist side by side in the world, it is necessary that one system be eliminated—and we hope that the eliminated one is not ours.

As long as there is hope of uniting the full industrial power of the United States and the British Empire, there is hope of beating any other combination that may get together in the world, if we can rely on statistics of industry and production.

On the other hand, if the British Empire should crash before our power could be combined with theirs, the same statistics show that totalitarian force of industry and production would far exceed our own. Furthermore, we would be attacked in the Pacific as soon as we found powerful enough ships to protect ourselves in the Atlantic.

UNITY IN PEACE

I think there are very few people today who do not realize that the present world situation might have been averted if America and England had not fallen apart in their foreign policy after the last war.

I also think that it is becoming an accepted fact that some nation or group of nations must stand out in the world as super-powerful in order to insure the rest of the world

against the operation of some highly centralized aggressive power, such as Germany has become in the last 10 years. If the United States and England had taken the concerted stand at any one of several periods during the last 10 years, no war would be in progress today, and the concerted action that might have prevented this war would also have vastly reduced expenditures brought about by direct participation of belligerents, as well as a vast saving to the United States in preparation for possibilities.

If the past few years can be a lesson for the future, there is reason to feel when this war is over that the various countries will not again crawl into their isolationist shell or bury their heads in the sand, with the hope that international relations will have suddenly become so honorable that no aggressor will again decide to break the peace.

FINANCIAL UNITY

It would be futile to try to organize democracies under a system of political control of the world, unless they first became thoroughly united financially. It is the struggle for markets for world trade that causes the politicians of our two countries to fall out with each other, and if America and Britain are to win the peace, as well as the war, there must be a control of markets and a control of currency.

The battle between the American dollar and the pound sterling that has upset the political relations of the two countries must cease, and be replaced by some understanding or control of the things that are usually allowed to affect the real value of the respective units of currency.

When we say "United we stand, divided we fall," we must think not in terms of individuals or states, but in terms of the nations who believe in and live for the same things—and it is only through a continuation of this policy that the peace will be worth fighting for.

Square D 6-Month Net Is \$1,397,346

DETROIT—A net profit of \$1,397,346 for the six months ended June 30, after reserving \$2,950,000 for normal and excess profits taxes, is reported by Square D Co. This is equal to \$3.19 a common share, after preferred dividend requirements, as compared with \$905,130, or \$2.03 a share, last year when the tax reserve was \$274,762.

The Service Man's Notebook

By Henry Kronke

This table can be used for quick determination of the hourly B.t.u. capacity of compressors. For example, consider a twin cylinder "Freon-12" compressor with a 2½ inch bore, 3¼ inch stroke, driven at 360 r.p.m., and operating at 5° F. suction temperature with 70° condensing medium. The compressor displacement per minute is 8,301 cubic inches. The multiplier from the table under the conditions stated is 1.2833. Thus 8,301 x 1.2833 = 10,662 B.t.u. per hour (theoretical capacity). The volumetric efficiency under the stated conditions (from a table published a few issues previously) is 59%. So .59 x 10,662 = 6,285 B.t.u. per hour. This method of figuring, however, does not take superheating and increase in the volume of suction vapor into consideration.

COMPRESSOR CAPACITY

HOURLY B.T.U. CAPACITY OF CH₂CL₂ COMPRESSORS

To obtain theoretical hourly B.t.u. capacity multiply the displacement in cubic inches per minute by proper factor from table below.

Suction Temp. — Liquid Temperature °F.—

°F.	60°	70°	80°	90°	100°
—25	0.5916	0.5774	0.5628	0.5482	0.5333
—20	0.6753	0.6590	0.6427	0.6260	0.6090
—15	0.7579	0.7395	0.7211	0.7027	0.6840
—10	0.8496	0.8295	0.8086	0.7878	0.7670
—5	0.9506	0.9281	0.9038	0.8819	0.8586
0	1.0670	1.0416	1.0159	0.9902	0.9638
5	1.1930	1.1649	1.1361	1.1076	1.0784
10	1.3361	1.3045	1.2725	1.2406	1.2082
15	1.4795	1.4447	1.4097	1.3743	1.3385
20	1.6423	1.6041	1.5652	1.5260	1.4868
25	1.8177	1.7763	1.7336	1.6906	1.6468
30	2.0211	1.9743	1.9267	1.8791	1.8309
35	2.2364	2.1847	2.1322	2.0798	2.0267
40	2.4666	2.4097	2.3524	2.2947	2.2364

HOURLY B.T.U. CAPACITY OF SO₂ COMPRESSORS

To obtain theoretical hourly B.t.u. capacity multiply the displacement in cubic inches per minute by proper factor.

Suction Temp. — Liquid Temperature °F.—

°F.	60°	70°	80°	90°	100°
—20	0.4135	0.4038	0.3940	0.3847	0.3750

—15	0.4770	0.4656	0.4545	0.4434	0.4326
—10	0.5479	0.5350	0.5225	0.5097	0.4972
—5	0.6267	0.6121	0.5975	0.5833	0.5690
0	0.7152	0.6986	0.6819	0.6656	0.6493
5	0.8132	0.7944	0.7757	0.7569	0.7382
10	0.9212	0.9000	0.8788	0.8576	0.8368
15	1.0406	1.0166	0.9927	0.9687	0.9454
20	1.1715	1.1447	1.1177	1.0909	1.0649
25	1.3187	1.2882	1.2579	1.2281	1.1986
30	1.4729	1.4392	1.4055	1.3722	1.3392
35	1.6444	1.6066	1.5690	1.5319	1.4951
40	1.8312	1.7892	1.7475	1.7062	1.6652

HOURLY B.T.U. CAPACITY OF "FREON-12" COMPRESSORS

To obtain theoretical hourly capacity multiply the displacement in cubic inches per minute by proper factor from table below.

Suction Temp. — Liquid Temperature °F.—

°F.	60°	70°	80°	90°	100°
—30	0.5972	0.5711	0.5444	0.5170	0.4892
—25	0.6760	0.6468	0.6166	0.5864	0.5552
—20	0.7618	0.7291	0.6958	0.6618	0.6274
—15	0.8569	0.8204	0.7833	0.7454	0.7069
—10	0.9614	0.9211	0.8798	0.8378	0.7954
—5	1.0763	1.0315	0.9861	0.9395	0.8923
0	1.2010	1.1517	1.1013	1.0500	0.9979
5	1.3378	1.2833	1.2277	1.1711	1.1135
10	1.4850	1.4253	1.3638	1.3017	1.2385
15	1.6472	1.5815	1.5142	1.4461	1.3767
20	1.8250	1.7527	1.6788	1.6038	1.5277
25	2.0149	1.9361	1.8555	1.7736	1.6902
30	2.2201	2.1336	2.0458	1.9562	1.8652
35	2.4399	2.3461	2.2503	2.1527	2.0538
40	2.6802	2.5781	2.4739	2.3677	2.2600

G-E Nets \$26 Million In 6 Months; Sales Set New Record

SCHENECTADY, N. Y.—General Electric Co.'s profit available for dividends for the first six months of this year amounted to \$26,003,665 compared with \$25,981,572 for the same period last year. These earnings, which were equivalent in each case to 90 cents a share of common stock, were after provisions for federal income and excess profits taxes of approximately \$52,000,000 for the six months' period this year compared with \$49,000,000 for the same period a year earlier.

A dividend of 35 cents a share of common stock is payable on July 25, making a total of 70 cents a share in dividends for the first half of this year, the same as was paid for the corresponding period of 1940.

Net sales billed by the company during the first half of this year exceeded the billing for any previous six months' period, amounting to \$300,332,085 compared with \$191,619,132 for the same period last year, an increase of 57%.

Output of equipment for national defense is increasing rapidly. The billing covering equipment definitely known to be for defense purposes during the first six months of this year increased 210% over that for the same period of last year.

ESTABLISHED 1864
CURTIS REFRIGERATION
AIR CONDITIONING • COMMERCIAL
Curtis Refrigerating Machine Division
of Curtis Manufacturing Company
1912 Kienlen Ave. St. Louis, Mo.

SUSPENDED TYPE COMFORT COOLERS
(1 to 3 Ton Capacity)
Silent • Efficient • Attractive
KRAMER-TRENTON CO.
TRENTON, N. J.

SPORLAN VALVES

3 CATALOGS IN 1
HERMETIC UNITS • COMPRESSORS • PARTS
FRIGIDAIRE • KELVINATOR • MORGUE • G-E
Complete Line Refrigeration Parts • Tools • Supplies
WRITE FOR YOUR COPY ON YOUR LETTERHEAD
SERVICE PARTS CO.
MELROSE PARK, ILLINOIS

END TROUBLE CALLS!
Investigate the exclusive advantages of White-Rodgers Hydraulic Action Controls. Your copy of new catalog will be sent by return mail. Write today!
White-Rodgers Electric Co.
1211 Cass Ave., St. Louis

Add to Your Product the Reputation of
PENN Controls
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

LET US SOLVE YOUR
COIL PROBLEMS
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

for Lower Resistance
Plus Higher Efficiency
Demand—
AIR-MAZE
Permanent Air-Filter Panels
AIR-MAZE CORP. CLEVELAND, OHIO

Use **CHICAGO SEALS**
for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

Consolidated Edison Reveals Details of Plan To Centralize All New York City Servicing

(Concluded from Page 1, Column 1)

ments with individual customers, landlords, organizations, etc., and would also set up a rehabilitation service for major appliances.

Just where the independent appliance service company and the independent repair man will fit into the picture is not made clear in a preliminary mimeographed prospectus of the plans just issued by the office of E. F. Jeffe, vice president of the Consolidated Edison Co.

The written proposal hardly mentions the independent service operator at all, and most of that mention is unfavorable. For example, the prospectus states: "The so-called 'racket' of servicing and repair has been the subject of recent expose in national magazines. Improper servicing and repairs and exorbitant charges have been the avenues through which the Consolidated Edison System Companies and the legitimate manufacturers, distributors, and dealers of appliances have suffered. The Consolidated Edison System Companies have lost considerable revenues because of the non-performance and subsequent non-use of appliances by customers."

Following are some of the other statements made in the prospectus:

"The purpose of the proposed company is to consolidate existing appliance servicing facilities to achieve:

1. Unification of sources of service and supply.
2. Reduced operating costs (a) inventory (b) personnel (c) equipment (d) floor space.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted," 5¢ per word; minimum charge, \$2.50. Three consecutive insertions, 12½¢ per word; minimum charge \$6.25.

RATES for all other classifications, 10¢ per word, minimum charge, \$5.00 per insertion. Three consecutive insertions, 25¢ per word, minimum charge, \$12.50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

DUE TO Army service, opening is available in Commercial Refrigeration Sales Engineering Department of one of largest manufacturers of refrigeration in United States. College training preferred and previous experience essential in estimating and quoting commercial refrigeration and in handling dealer correspondence and in compilation of manuals and other data. Write full particulars and send snapshot with first letter. Box 1350, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

DIRECT FACTORY Connection: Sell Refrigerator Display Cases, Walk-In Coolers, Reach-In Refrigerators, Refrigerating Units to Meat Markets, Grocers, Taverns, etc. Financing arrangements to help sell. Write for full information or see ERLICH REFRIGERATOR MFG. CO., St. Joseph, Mo., Dept. A.

EQUIPMENT FOR SALE

SURPLUS STOCK: Brand new Westinghouse low-sides, complete with coils, valves, fans, manual controls, etc. One to two ton capacity. AC Models \$32.50 each; DC models easily converted to AC \$18.50 each. ½" Mueller strainers with ½" to ¾" flare nuts 60¢ each in lots of 5. Complete stock "as is" or rebuilt commercial units. Three fan Frigidaire blower suitable for use on 3 HP condensing unit, ideal for beer cooler. "As is" and rebuilt refrigerators. Write for prices. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Ave., Philadelphia, Pa.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

Specify ALCO Engineered Refrigerant Controls for Maximum Performance
ALCO VALVE CO. ST. LOUIS, MO.

"3. Increased efficiency (a) unified control (b) cooperative efforts (c) increased volume.

"4. Improved customer goodwill (a) prompt, efficient service (b) moderate scale of charges (c) repair finance plan.

"5. Stimulate use of appliances because of availability of a moderate cost service and repair program.

"6. Cooperation in the present National Emergency to fill the gap left by the use of materials and material withdrawn from the appliance field in support of the Defense Program.

REPAIR DEPOTS PLANNED

"Cooperating dealers will be permitted to participate in this plan by being designated as depots where appliances for repair may be brought by customers. A regular delivery service will be maintained to call for the appliances left at the established appliance service and repair counter at all of the district offices of the Consolidated Edison system companies.

"The appliances will be repaired at the various repair depots of the company under a supervised repair program, will be inspected and tested, and will be returned to the owner of the appliance with a tag certifying that the appliance has undergone proper servicing and repair and has been tested and found to be satisfactory in every respect. This tag will indicate the repair charge.

"As much as possible, standard price charts will be set up, which charts will be distributed to cooperating dealers and district offices of the Consolidated Edison System companies for their use. In such instances where standard price charts cannot be set up, the customer will be advised as to the charges for the repair work before work is undertaken, and if the customer does not desire that the company proceed with the repairs, the appliance will be returned to the customer without charge.

TAKE OVER CONTRACTS?

"In addition to the repair service, the company will undertake servicing agreements with individual customers, landlords, organizations, etc. and will also set up a rehabilitation service for major appliances.

"Cooperating dealers will be designated as centers where customers may bring their appliances for repairs. Such appliances will then be taken to the nearest utility district office and left at the repair counter. The dealer will receive a fixed commission on all work which he submits for repairs or servicing.

"Through the cooperation of the National City Finance Plan, customers of the company will be able to pay for their servicing, repairs, etc. over periods ranging from three to six months (minimum \$1.00 per month) at a very low finance charge. Deferred payments for service will be accepted at any of the district offices of the Consolidated Edison System Companies and possibly at the branch offices of the National City Bank.

"The proposed plan will fill in the gap which is being increased every day by the inability of manufacturers to secure necessary raw materials to produce appliances because of our defense efforts. Unless a proper substitute is found for the scarcity of new appliances, the utilities will be greatly damaged and cooperating dealers, in whose organization and education so much effort has been spent, will close their business and the entire constructive organization which has been developed will crumble.

WHERE DEALER COMES IN

"This plan affords cooperating dealers the opportunity of selling service and repairs to their customers on a scale sufficiently large to continue business on a profitable basis and to offer such service through a company, association with which will bring credit and respect to the cooperating dealers.

"Manufacturers who desire to enter this territory with products will not be faced with the problem

of scarcity of distributors with proper servicing facilities. This company will be in a position to undertake the servicing of any manufacturer's product.

"Probably one of the greatest detriments to the promotion of electric ranges has been the absence of servicing facilities other than those supplied in some instances by the utilities. Distributors would be relieved of expensive servicing establishments which, through their very existence, destroy confidence in the prospective purchaser of their appliances.

"Parts for repairs and replacements of appliances have been placed on the priority schedule by the OPM. Landlords would welcome such a service since thereby the electric refrigerators and ranges which they install for tenants could be rehabilitated to an acceptable and satisfactory degree and the relationship between landlord and tenant would be improved.

"Agreements would be worked out with the various manufacturers, distributors, utility, and other vendors to cover (a) subsidy for free service to comply with terms of manufacturers warranty (b) defective materials (c) purchase agreements—discounts (d) damage claims (e) charges on out-of-warranty service (f) factory repair and return on small appliances (g) consignment of service records (h) sales leads.

PARTS ON CONSIGNMENT

"Plans would be developed so that the manufacturers and distributors could consign a reasonable stock of repair parts and units to the company for the purpose of maintaining efficient and prompt service of appliances.

"It is expected that all interested manufacturers and distributors would consign parts and units to the company on some agreed upon basis, possibly inventory and payment every 90 days.

"An appraisal would have to be made of all outstanding service contracts which utilities, manufacturers, distributors, etc. would desire to transfer to this company and an amount would be agreed upon with respect to payment for the unexpired portion of the contract.

CONTRACTS BY UTILITY

"New service contracts issued by this company would be, in accordance with agreement, executed by distributor and manufacturer and the company.

"It is expected that certain economies which will be effected by the company because of increased efficiency and service volume, will ultimately be reflected in the lowered cost of free service.

"Charges for other service and repair functions of the company will be worked out and submitted to the manufacturer and distributor and interested parties for approval—such charges to reflect company costs plus reasonable return on investment."

And in conclusion, the Consolidated Edison's prospectus goes into the reasons why it thinks such a plan should be considered:

"Service of electrical appliances is now being provided by a varied and vast assortment of distributors, dealers, and independent service agents whose policies, facilities, and charges are at wide variance.

"The absence of any large supervised and reputable source of service for all reliable or practically all appliances has unquestionably discouraged the continued maintenance and use of appliances which are merely in need of efficient repair at moderate cost.

"This outline of a proposed com-

pany to correct the problem of appliance service and repairs must, of necessity, be brief and incomplete. Only purpose of this report is to outline what might be developed from the idea of unified service for the territory of the Consolidated Edison system companies. The problem is of such scope that a great deal of research would be necessary to arrive at certain conclusions with respect to policies, prices, rates, subsidies, agreements, operation, and personnel. But nevertheless the best way to accomplish this is to start.

"With proper surveys, intelligent organization and management, a company such as described in this memorandum could be developed. The results of service of this type could only be reflected in an overall improvement in the customer relations of the Consolidated Edison system companies. Further, there should be a consistent improvement in the utility load because of the number of now unused appliances which would be put back on the lines of the company."

Responsibility for the proper management of the company, outlines the prospectus, would rest with a board of governors, consisting of representatives for electric and gas refrigeration equipment manufacturers, a home laundry manufacturer, two radio manufacturers, two small appliance makers, one air conditioning manufacturer, one gas and one electric range manufacturer, (ditto for heating equipment), one hotel and restaurant equipment manufacturer (electric), and the same for manufacturer of such gas equipment, one major appliance distributor, one small appliance distributor, one cooperating dealer from each of the boroughs of the Consolidated Edison system, and one utility representative.

Anaconda Copper Refrigeration Tubes

Easily bent!



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices: Waterbury, Conn.

BUNDY TUBING

ENGINEERED TO YOUR EXPECTATIONS

BUNDY TUBING CO., DETROIT

Get These Profits

Refrigeration and insulation distributors make an extra profit selling

SAF-T-LOC Individual Lockers

Write for particulars

Master Refrigerated Locker Systems, Inc.

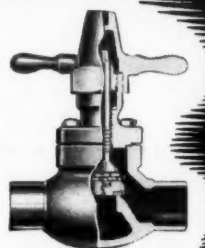
121 Main St. Sioux City, Iowa

225,000 Masterbuilt Lockers In Use

MOST COMPLETE LINE... OVER 100 MODELS
Specify Fedders UNIT COOLERS
FEDDERS MFG. CO. BUFFALO, N. Y.

Henry

Wing Cap Valve... TYPE 203



NON-FERROUS ALLOY MEETS GOVERNMENT SPECIFICATIONS

Solder connections machined directly in valve body. Has patented rotating self-aligning tapered stem-disc. Resilient packing. Valve is back-seating, permitting repacking under pressure. Wing cap can be inverted and its socket used to operate valve. Cap sealing on bonnet provides additional protection against leaks. Unrestricted flow

For Freon and Methyl Chloride

HENRY VALVE CO.
1001-19 N. SPAULDING AVE.
CHICAGO, ILLINOIS

BIGGER PROFITS WITH THE COMPLETE TYLER LINE...

★ With more money in circulation, stores, restaurants, hotels, bars, taverns, all need new equipment to get their share of EXTRA BUSINESS. The complete Tyler line meets every need—offers extra value, extra savings. Write TYLER FUTURE CORPORATION, DEPT. R-2, NILES, MICHIGAN

TYLER DEALERS ARE MAKING MONEY!



*TYLER WELDED STEEL REFRIGERATED DISPLAY CASES, REACH-IN BOXES, SECTIONAL STEEL GLAD, WALK-IN COOLERS, DRY, HOLD BEVERAGE COOLERS, BEER DISPENSERS

One Instrument UNIVERSAL IN APPLICATION

FOR PRESSURE CONTROL UP TO 1 H.P.A.C.

POLARTRON

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

2807 FOURTH AVENUE SOUTH, MINNEAPOLIS, MINNESOTA

REFRIGERATION CONTROL

Eight Series 40 Polartron Advantages
* Separate "On and Off" Knobs
* Regulator Pressure Compensation
* Cooling Control on Cut Out or Cut In
* Polartron—Vaporized Compressor
* Can be Connected to Produce Frost-Free Controlled Cold
* No Short Cycling
* Universal Range
* Minimum Frost Service
* Power Models in Stock

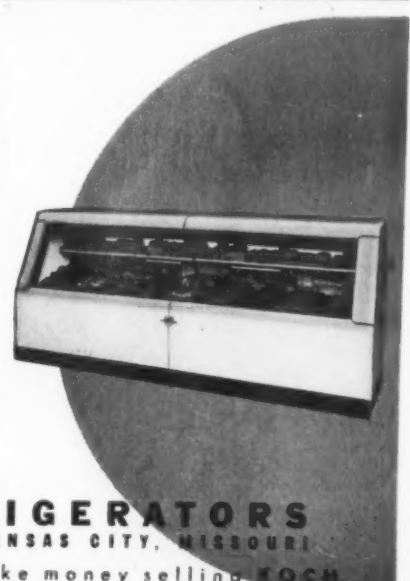
A CASE OF PERFECT

PERFORMANCE



Performance that is perfect every minute of the day... that's what you get with every Koch display case. Miraculous cooling units mean perfect refrigeration. K-Beam lighting gives added sales impetus to profit-making displays. Welded steel construction and 4-in. insulation... permanent satisfaction built right into the case. Investigate the Koch case... and the complete Koch line. Write today for complete details, open territories, and Koch selling plan.

KOCH REFRIGERATORS
NORTH KANSAS CITY, MISSOURI
You'll make money selling KOCH



Tough Job Faced By Industry Committee

(Concluded from Page 1, Column 5) Shearman put the subcommittees to work discussing the matters assigned to each.

The preliminary discussion session produced the following interesting information:

(1) An order implementing the A-10 priority rating for refrigeration repair parts is now on Donald Nelson's desk, awaiting his signature. It should be through "soon."

(2) "E" specifications will soon be coming through on government orders. These are "emergency alternate specifications to conserve needed materials."

(3) All the OPACS men (Weiner, Brown, Cox, Kozer, Parker, Tober, Diniger) with whom the industry has been consorting are still around, and still very much in the picture. Reorganization of their department under SPAB simply means that "the axe has been taken out of OPACS and put into OPM."

(4) The government will soon set "police" on the trail of bootleggers and hijackers of strategic and critical materials.

Subjects taken up by the various subcommittees included:

Subcommittee One: Percentage of defense work being done by each factory; products and materials needed for that work; possible control of inventories as an industry.

Subcommittee Two: Recommendation for simplification of products.

Subcommittee Three: Survey of all government departments to determine their needs for the next 12 months; study of the use of government forms.

Subcommittee Four: Information on the industry which might be useful in determining a blanket priority rating.

Subcommittee Five: Survey of plant facilities to show specific types of machines that could be diverted to armament work; determination of number of employees in the industry affected by curtailment of operations.

Subcommittee Six: Study of purchasing procedure; development of means of cutting redtape and avoiding jams; study of specifications.

Subcommittee Seven: Simplification of specifications; elimination of "engineering pipe dreams."

Subcommittee Eight: Study of the supply of "Freon."

In addition to the former OPACS men mentioned previously, Messrs. Anderson, Church, and Heckscher of OPM were there, and Lieut. Bob Cook (familiar to most A.S.R.E. members) of the Army Ordnance Department.

Dealers Sans Samples Use Joint Display

(Concluded from Page 1, Column 2) aged air conditioning. A skilled demonstrator will be on hand at all times to assist Westinghouse's 60-odd dealers franchised in St. Louis and surrounding territory in showing appliances under the best possible conditions.

No retail sales will be made from the store in any instance, Dean Whiteman, merchandise manager of the St. Louis division, said—the new store being primarily set up to allow the dealer to use it to close his own prospects and handle his own deals.

The novel store was built simply to meet the fact that shortages in appliance deliveries mean that many small dealers who maintain a stock only of a few demonstrators will otherwise be forced out of business, according to Mr. Whiteman.

Glenn Gundell Moved To G-E Appliance Dept.

(Concluded from Page 1, Column 2) the G-E appliance and merchandise department since 1929, and most recently advertising supervisor for electric clocks at Bridgeport.

In his new post, Mr. Gundell will assist Boyd W. Bullock, appliance advertising manager, in the administration of the advertising division.

Harold P. Smith, formerly assistant to Mr. Bullock, has left this post to assume new duties in the G-E accounting department at Bridgeport.

Household Sales 355,000 In July

DETROIT—World shipments of household electric refrigerators totaled approximately 355,000 units during July to bring well past the 2,900,000-unit mark the figure for the first seven months of this year, according to estimates by AIR CONDITIONING & REFRIGERATION NEWS.

Although some 55,000 units below the mark of 410,000 recorded for June, the preceding month, July shipments this year still were approximately 100,000 higher than the total of 256,000, previous record for the month, set in July of last year. It was the seventh consecutive month in which shipments have passed the 350,000-unit mark, and maintained the household industry's record of having broken a record a month in 1941.

World industry shipments for the first seven months of this year amount to 2,937,000 units, as compared with an estimated total of 2,720,000 for the whole year of 1940, and a total of 2,178,000 for the first seven months of last year.

World shipments during July by 12 companies reporting to National Electrical Manufacturers Association totaled 335,072 units, as compared with 243,113 in the same month of 1940. For the seven months, Nema shipments total 2,728,097 units, against 2,071,160 in the same period of last year.

During all of 1940, world shipments by Nema members totaled 2,676,435 units.

Steel Shortage Forces Layoff At G-E Plant

(Concluded from Page 1, Column 3) that the lay-off cuts the working force down to about 2,400 persons.

It was expected that some of the workers affected by the refrigerator curtailment would be absorbed in the departments where gun mounts and navy turbines are now being made.

Lay-off notice was given the 800 workers a week in advance of the annual two weeks' shutdown of the department for making of mechanical changes in connection with 1942 refrigerator models, workers affected being instructed not to return to that department when operations were resumed.

If materials are received from the Federal government for use in the refrigerator division, the lay-off may be brief, it was said.

Sales By States

States and Territories	Quantity Household Low Sides July Cumulative	
Alabama	3,863	31,442
Arizona	1,240	8,683
Arkansas	1,598	19,359
California	21,948	172,083
Colorado	2,418	18,241
Connecticut	5,316	53,672
Delaware	649	6,687
District of Columbia	3,365	20,864
Florida	4,332	28,452
Georgia	5,556	42,054
Idaho	1,192	10,151
Illinois	20,243	191,792
Indiana	10,668	77,942
Iowa	5,371	51,029
Kansas	3,289	25,990
Kentucky	3,438	34,788
Louisiana	3,745	29,075
Maine	1,730	13,270
Maryland	3,896	34,096
Massachusetts	11,701	98,272
Michigan	20,256	141,306
Minnesota	6,062	75,422
Mississippi	2,566	17,508
Missouri	9,922	69,522
Montana	690	7,673
Nebraska	2,283	18,213
Nevada	416	2,526
New Hampshire	1,226	9,465
New Jersey	10,838	110,490
New Mexico	783	4,474
New York	33,974	252,176
North Carolina	4,683	49,705
North Dakota	534	4,288
Ohio	24,124	179,340
Oklahoma	2,030	24,159
Oregon	3,157	28,046
Pennsylvania	30,250	229,266
Rhode Island	1,968	17,321
South Carolina	3,027	26,202
South Dakota	734	5,577
Tennessee	4,864	46,694
Texas	9,967	101,156
Utah	1,248	13,414
Vermont	802	5,733
Virginia	6,051	45,175
Washington	6,018	47,793
West Virginia	4,503	28,900
Wisconsin	6,889	63,704
Wyoming	259	2,940
Total United States	315,682	2,596,130
Canada	6,741	45,345
Other Foreign (Incl. U. S. Possessions)	12,649	86,622
Total for World	335,072	2,728,097

315,682 Household Units Shipped To U. S. Firms During July

The following 12 companies reported sales to the Refrigeration Division of the National Electrical Manufacturers Association (Nema) on household electric refrigerators for July, 1941:

Crosley Corp., Edison General Electric Appliance Co., Inc., Frigidaire Div. General Motors Corp., Gale Products Div. Outboard Marine & Mfg. Co. (out as of June 30, 1941), General Electric Co., Gibson Electric Refrigerator Corp., Kel-

vinator Div. Nash-Kelvinator Corp., Leonard Div. Nash-Kelvinator Corp., Norge Div. Borg-Warner Corp., Stewart-Warner Corp., Sunbeam Electric Mfg. Co., and Westinghouse Electric & Mfg. Co.

The sales of the reporting companies include units manufactured for the following concerns: Montgomery Ward & Co., Potter Refrigeration Corp., and Sears, Roebuck & Co.

SALES FOR JULY, 1941

	Domestic	Canadian	Other Foreign	Total World
Lacquer (Ext.) Cabinets Complete				
1. Less than 4 cu. ft.	2,721	38	1,942	4,701
2. 4 to 4.99 cu. ft.	18,063	1,093	3,038	22,194
3. 5 to 5.99 cu. ft.	344	60	...	404
4. 6 to 6.99 cu. ft.	219,579	5,025	4,984	229,588
5. 7 to 7.99 cu. ft.	25,821	...	471	26,292
6. 8 to 8.99 cu. ft.	20,781	448	892	22,121
7. 9 to 12.99 cu. ft.	7,679	75	360	8,114
8. 13 cu. ft. and up	66	...	...	66
9. Total Lacquer	295,054	6,739	11,687	313,480
Porcelain (Ext.) Cabinets Complete				
10. Less than 5 cu. ft.	...	...	...	...
11. 5 to 5.99 cu. ft.	18	...	...	18
12. 6 to 6.99 cu. ft.	14,195	...	378	14,573
13. 7 to 7.99 cu. ft.	2,936	...	83	3,019
14. 8 to 8.99 cu. ft.	998	...	44	1,042
15. 9 to 12.99 cu. ft.	1,827	2	118	1,947
16. 13 cu. ft. and up	654	...	58	712
17. Total Porcelain	20,628	2	681	21,311
18. Total—Lines 9 and 17	315,682	6,741	12,368	334,791
19. Separate Systems, 1/4 Hp. or Less	...	...	281	281
20. Total Household Equipment	315,682	6,741	12,649	335,072
Value Index*	217.0	375.0	101.0	210.0

*Based on weighted sales for 1934, 1935, and 1936.

Avert Freon Leaks, Servicemen Urge

(Concluded from Page 1, Column 4) has been passed by the Twin Cities chapter of Refrigeration Service Engineers Society. Local newspapers gave considerable attention to this action by refrigeration service firms.

The chapter has also taken action urging the city council to amend its ordinance governing the use of refrigerants so as to permit the use of methyl chloride and sulphur dioxide, if necessary, during the emergency. A committee met with members of the city council here last week to discuss the proposal.

The chapter is preparing a bulletin to be sent to all members and to the mailing list of refrigeration service men, asking them to write their congressmen on behalf of the industry and ask that the flow of raw materials essential for the manufacture of parts vital to the industry be increased.

Kold-Hold Buys Savage Truck Plate Division

(Concluded from Page 1, Column 5) all Savage truck plates now in service for the convenience of present users, it was stated. Acquisition of the Savage business fits in with Kold-Hold's expanded program.

Greatly accelerated defense volume on the part of Savage Arms was given as a major reason for the decision to dispose of the division.



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